

AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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PRESERVATION OF CABBAGES.

As this common and very wholesome esculent has a greater tendency to putrefaction than most other vegetable substances, and emits during this state, a very disagreeable odor, it is important to know by what means it can be preserved. Among the various methods recommended, the two following are deemed sufficient, as they both have been practiced with success:—

1. Select a dry piece of ground, cut the heads of the cabbage from their stumps, and place them in parallel rows, with the top part down, and any desired length or width. Make these rows one less in width and length every layer, so that when the heap is finished it will come to a point, and appear very much like a pile of cannon balls in an arsenal. Over this heap, place a covering of straw, and then put on the dirt sufficiently thick, the same as on a potato heap, to keep out the frost, and the work is done. The earth should be spatted down hard on the four sides, making the top sharp, like the roof of a house, so as to shed rain well. If the ground where the cabbage is stored, be of a heavy clay, it should be trenched round the heap, so as to carry off the water, and a bed of straw or round logs six inches or a foot thick be made for it to rest upon, and as a drain for all moisture, it being quite important that vegetables of every kind be kept dry.

2. Cut the cabbages so that they may have two inches of stem left below the leaves; scoop out the pith as far into the stalk as a small knife will reach; then suspend the heads, by means of a cord, exactly perpendicular, but in an inverted position, and fill up, daily, the hollow part of the stem with clean cold water.

By this method, cabbages, cauliflowers, broccoli, celery, &c., may be preserved for some time, if

kept in a cool place, thus affording an easy means of keeping a winter's supply of vegetables fresh and green.

NATIONAL POMOLOGICAL CONVENTION.

This was opened at Clinton Hall, in this city, on the 4th ult. It was composed of several hundred delegates from various parts of the Union. These were highly intelligent and respectable, and embodied a vast amount of pomological experience and knowledge adapted to the wants and circumstances of this country.

The show of fruits surpassed anything we had before seen unless we except that exhibited at Buffalo just previous to the state fair. We noticed a large number of choice grapes and other fruits from Massachusetts, Connecticut, New Jersey, and other states, though our own was by far the largest contributor. Mr. Wilder, from Boston, sent in as one item, 120 varieties of pears.

TWENTY-FIRST ANNUAL SHOW AND FAIR OF THE AMERICAN INSTITUTE.

This show was held at Castle Garden, which, as usual, was conveniently arranged from its entrance on the bridge, through its whole distance and the entire area within, for the display of the various articles exhibited. There was an addition to this large space, formed by an enclosure on the western side of the garden, where the steam engine was placed for driving the machinery. Besides the convenience of having this all together and detached from the other exhibition, there was a great advantage in being so abundantly lighted that every part of the machinery could be minutely examined, and their merits or defects fully appreciated.

The show was good as a whole, and some new articles claimed a particular share of attention.

Among these, we noticed the recently introduced manufactures from *gutta percha*. This has already assumed a great variety of forms under the plastic hands of Yankee ingenuity. We observed belts of all sizes, lengths, and thickness; carriage, wagon and dray springs; boots and shoes, and clothing of different forms. This material seems destined, hereafter, to become an important element among the useful arts of the United States. The display of India-rubber articles was also good, and among other items made from it, we noticed an inflated boat, capable of carrying several persons. This, we conceive, would be a valuable article for exploring expeditions, where shallow, rocky streams are to be passed, which precludes breakage and leakage from grounding. It is light and portable, and easily carried by hand; and a compact, yet strong and easily-expanding frame work, when inserted, keeps the outer covering in proper shape, and when separated, either may be folded and carried in the hand. A new material called Blake's patent fire and weather proof paint, or artificial slate, formed from a peculiar mineral, found near Akron, Ohio, when applied to wood gives it the appearance and durability of highly-polished slate, or compact marble, and is said to be enduring.

There were beautiful specimens of *scagliola*, or artificial marble columns, made from broken marble, sand, and cement, fully equalling the best specimens of the original in brilliancy, naturalness of color, and high polish of surface. Mosaic work tables of the same material, at a short distance could not be distinguished from the genuine marble.

Papier-maché chairs, inlaid with pearl, and boxes of various kinds were exhibited, and they are said to be the first ever made in this country. Numerous other specimens of handy work from artists of almost every kind, useful and ornamental, were displayed in their usual profusion. There was one specimen of art which stared every one in the face as they entered, which, to our taste, at least, was in the highest degree objectionable. This was a wax loafer, in a red flannel shirt, and trousers, with a segar in his mouth, cocked up in the most approved style of independent blackguardism. The workmanship of this may be good—we have such a disgust to the genus, we did not scan it closely—and the specimen may have been attractive enough to many of the visitors from a kindred sympathy; but we put it to the managers in all courtesy, whether this species of loaferism is not instinct and rampant enough in democratic America, without fostering its development or even gratifying its sympathies under their grave and reverend auspices. It ought to have been put into the glass hearse, which was equally conspicuous and offensive to good taste in this exhibition, and sent to potter's field for mutual deposit.

A napping machine for finishing broadcloths and cassimeres was shown, composed of a series of circular saws, like that of a cotton gin, but closely compacted together so as to form a solid cylinder. They appear indestructible from the use to which they are subjected. These machines are said to have superseded the use of teasles.

We noticed beautiful specimens of water-rotted hemp, of which 300 tons were furnished to the United States Navy Yard, at Charlestown, alone.

There were, also, very choice samples of flax, water rotted, and dressed by the American company in four days. A new impetus seems to have been given to the preparation of these, and their manufacture into various articles heretofore imported and largely consumed in this country. There is no reason why we should not raise all the flax and hemp we consume, and none why we should not manufacture it to the fullest extent of our own wants, aye, and export the fabrics abroad, as we now do those of our cotton. There were fine samples of raw and manufactured silk of various kinds, vestings, ribbons, handkerchiefs, fringes, sewings, &c. On one of these, we noticed a statement that \$3,000 worth of silk fabrics are turned out weekly from one establishment in the city of New York. We regret to add the fact, that a large proportion of the raw material used in these various manufactures, is brought from abroad. Why this continues to be the case among an intelligent population, with whom many of the staple productions are almost a drug in the market, passes our comprehension. The seed may be sown, or cuttings thickly transplanted, and from either, a dense mulberry hedge may be reared within two years, capable of feeding an indefinite quantity of worms. It is conceded, that no country in the world is better suited, in soil and climate for the culture of the mulberry, from Maine to Louisiana, than our own. It is also proved to be a profitable employment; for, two females, without any additional aid of any kind, raised \$600 worth of raw silk in four months. It is also a reasonably safe business, being equally removed from violent fluctuations in the market on one hand, and casualties from the loss of worms (the only disaster that can befall the pursuit), on the other. And it is proved we need the article for home consumption. Then why are we left so far behind the legitimate demand for this valuable product? American farmers and spinsters must answer, not we.

Of cheeses, we saw some of the largest ever exhibited; 600, 700, 1,500, 1,700 lbs. were the weights appended to them. We can almost credit the man's butter story, whose father used to have so large churnings that he set a saw mill on the hill side, below his house, which was entirely carried by buttermilk. They were made by Messrs. Austin & Co., genuine Yankees, on the Ohio Reserve. Such a mass of concrete casein seldom occurs, and should it happen to become fossilized, some remote geologists, in the dim futurity of ages to come, would certainly assume that a race of human mastodons once inhabited this sphere.

The show of agricultural implements was very good. Some novelties were exhibited here for the first time. We saw no implements, however, whose merits had been so far tested as to command them to special attention.

Flowers, Fruits, Vegetables, &c.—There was a very large display of fruits, which were in a considerable degree contributed by the pomological society. The exhibition of fruit was limited pretty much to apples and pears, though a few peaches, grapes and plums were shown. Some choice vegetables made their appearance in the shape of mammoth pumpkins, beets, &c., surmounted with giant corn

and its numerous sub-varieties. There was rather a dearth of articles in the amphitheatre of seats above; and though the rotunda was quite full, there was room for an additional quantity of our artists' works. The display on the whole, was good, and the receipts beyond those of any former year. We were glad to notice an efficient police on the premises, and good order and gratification seemed to pervade the exhibition throughout.

The amount received at the garden, exceeded \$15,000, which, with the free tickets issued, will give over 100,000 visitors.

The Cattle Show.—We did not see all the animals exhibited, but from those left when we were on the ground, and the appearance of many of these, we infer that it was inferior as a whole to any preceding year. The fact is, the farmers ought to take up this matter in their own right and on their own responsibility. The idea of awakening that enthusiasm on the subject of cattle and stock generally, among a commercial or manufacturing community, as this city notoriously is, must appear at a first glance as entirely preposterous. If any doubt exists of the fact, the history of these cattle shows will unqualifiedly establish it. The whole matter, funds, arrangement, &c., should be handed over at once to the farming public, and let them manage it in their own way. It would, undoubtedly be much better, and could not well be worse than it now is. The right men and right arrangements would certainly not fail to draw out a larger competition than we have yet seen there.

As it was, there were some very fine specimens of Devon oxen and Merino sheep exhibited by Mr. Blakeslee, of Connecticut; choice Alderneys, Ayrshires, as well as some cygnets, and a large assortment of other poultry, by R. L. Colt, Esq., of Patterson, N. J.; good Durhams by L. G. Morris, Esq., and various others which we have not room to specify particularly. The premiums awarded will show their number and relative merits.

THE COW—HER DISEASES AND MANAGEMENT.—No. 7.

Anticor, or Inflammation of the External Chest.—This species of inflammation, which often attacks the dewlap, generally arises from the same causes as other inflammations; but in the cow, it is particularly connected with improper feeding, and the treatment must be governed by similar principles. The symptoms are a sudden swelling of the dewlap, which gradually advances towards the head, and is attended with much hardness and heat.

The treatment most serviceable in this malady, is a purge, composed of the following ingredients:—

Flour of sulphur, 9 oz.; saltpetre (nitre), 1½ oz.; grains of Paradise, 5 drachms.

To be mixed together and given at one dose in two quarts of water gruel, sweetened with half a pint of molasses.

This complaint also admits of being much relieved by external applications, in the form of a liniment, or embrocation; as

Oil of vitriol (sulphuric acid), ¾ oz.: linseed oil, 6 oz.; spirit of turpentine, 1½ oz.

To be mixed together and rubbed on the dewlap twice a day, having first made two or three incisions with a fleam on the most depending part, which will produce a discharge, and thus powerfully assist the other means of relief.

After the operation of the above-named medicines, the alternative plan is next to be adopted, consisting in the use of the following:—

Saltpetre, 1½ oz.; camphor, ¾ drachms; flour of sulphur, 3 oz.; long pepper, ¾ oz.; gentian, ¾ oz.

The whole to be mixed and given at one dose in three pints of warm ale, or strong beer, repeated once a day, or once every other day, according to circumstances. In most cases, this treatment will be found to cure, if the disease be taken at an early period; but if neglected, it is apt to terminate in gangrene, or mortification of the part.

A soft swelling sometimes appears in this situation, which is of a different nature from the anticor.

Red Water, or Staling of Blood.—This complaint is a peculiar species of inflammation of the kidneys, or of the bladder, which very often proves fatal. The symptoms are known by the urine being tinged with blood, which is generally voided after a long attempt to make it. The cows laboring under this disease, leave the rest of the herd and appear to have little or no appetite; their hair stands on end; their eyes are dull and heavy, and appear when the inflammation is far advanced, sunken in their heads. From the fever which attends this disease, the state of the bowels, which generally, at first, are loose, becomes the reverse in the end, and the parts affected very much contracted.

Notwithstanding the appearance of the disease is so formidable, in most cases, it will readily yield to a large dose of salts administered at one dose, with the following ingredients:—

Epsom salts, 1½ lbs.; althea ointment, 3 oz.; saltpetre, ¾ oz.; fenugreek, in powder, 1½ oz.; powdered mustard seed, 1½ oz.

To be given in three quarts of gruel in which two ounces of soap have been dissolved. But if the bowels are in a relaxed state, and no costiveness has come on, then, instead of the former, a different course must be pursued, and the use of strengthening and gently astringent medicines employed, among which the following has been used with success:—

Turpentine, 18 drachms; red saunders, 1½ oz.; bayberries (*Laurus nobilis*), 1½ oz.; bole Armenian, 1½ oz.; saltpetre, ¾ oz.

To be made up for one dose, and given in two quarts of water gruel, and repeated every day until the health of the animal is restored. By this means, the relaxed state of the kidneys will gradually be braced up, the water resume its natural color, and the disease be brought to a favorable termination.

Another mode of practice, which is not so common in this complaint, is pegging the dewlap, in the manner recommended for the Inflammation of the Lungs. The effect of this is, to give a sudden turn to the appearance of the water, and thus it would seem as if a revulsion were made from the seat of the disease. In all cases of moderate looseness, under this disorder, the practitioner should never be afraid to employ the salts as recommended above; for, as costiveness generally takes place in the end of the disease, this preliminary step pre-

vents its occurrence, and proves, when properly administered, the speediest method of cure. In order to render this mode of treatment still more effectual, it may be accompanied with decoctions, or drinks of the following vulnerary-herbs:—

Shepherds' purse, a handful; comfrey root, washed, 2 lbs.; plantain, sage, and nettles, each, a large handful.

To be boiled in a gallon of water till it is reduced to three quarts; strain off, and give a quart once a day.

To cooperate with these means, the regimen of the cow must not be forgotten. Her diet should consist of the softest and most succulent kinds of food, such as Indian-meal gruel, currants, bran mash, &c. In point of situation, she should be kept under cover, and not exposed to the heat of the sun, either by placing her under a shed, or in a stable or barn.

IMPROVED ROTARY CYLINDER STRAW CUTTERS.

We observe the American Institute, of this city, recently awarded the first premium for Messrs. Rugles, Nourse & Mason's improved straw cutters. This we deem but a sheer act of justice to this highly meritorious implement. There was an unusual competition in this branch of agricultural implements, and numerous good specimens of cutters were offered for premiums. This machine was also awarded the first premium at the New-York State Fair, recently held at Buffalo, and it has also received numerous premiums at various county agricultural societies, mechanical associations, including the Mechanics' Fair, held at Worcester, Mass., during the last month. We shall give a particular description of it in our next. It is for sale at our Agricultural Warehouse, 189 and 191 Water street, New York.

IMPROVED REFRIGERATORS.

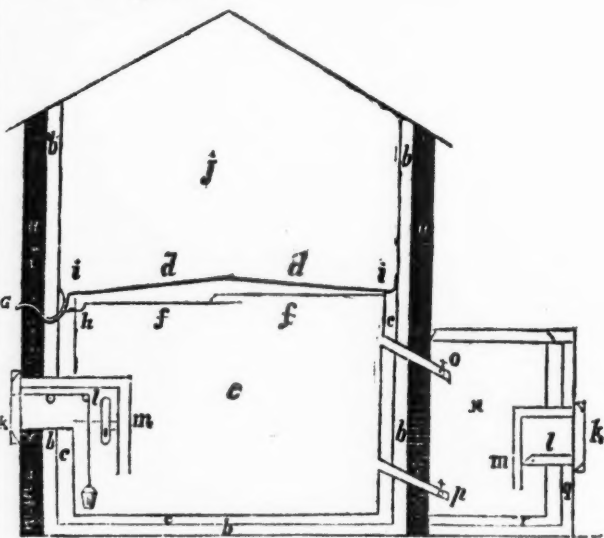
It has long been the practice of house keepers and others to preserve perishable articles by packing, or placing them in a box, or chest of ice, with which they come in contact or are exposed to a damp atmosphere, &c. These objections are entirely obviated by the method described below, which has been improved by me and patented in the United States. It offers essential advantages to persons who store ice for sale, as, by this plan, they can have, at all times, a large, cool, dry room attached to their ice houses, without any additional cost for ice, after the ice chamber has properly been filled to the depth of 10 or 12 feet, which need not be done but once a year.

This invention, I conceive, is founded on true philosophical principles. It is the natural tendency of heated air to ascend, and of cool air to descend; and if an apartment has ice properly applied, the whole of the air within it will eventually assume a uniformly low temperature. The proper application of ice should be on the top; as, from the warm air constantly ascending and coming in contact with the metallic ceiling, the temperature must very soon become uniformly cool; and the moisture of this warm air will be condensed in drops and carried out of the building, and the air inside thus kept dry.

The mode of entrance into the room is governed by the same principle. There can be but little or no displacement of the air inside the *well entrance*, which, in this case, acts as a valve, and so perfectly, too, that, when a lighted lamp is held below the well, and the doors are opened above, no disturbance of the flame is perceptible. The doorway can be made at any height from the bottom that may suit the location, and the well can be constructed either inside or outside of the building.

What, then can be better for preserving fruit, vegetables, meat, cheese, &c., than a cool, dry room, easy of access, placed in any situation, and of any size? There are now several such in successful use, on a large scale.

Some may object to the keeping of ice above ground, but it is a well-ascertained fact, that this substance will keep best in this way, if well ventilated and kept dry—and it is very difficult to do this under ground.



IMPROVED REFRIGERATORS.—FIG. 84.

Explanation of the Engraving.—The walls of the main building, *a, a*, may be constructed of stone, brick, or wood—the latter is preferable from its dryness.

b, b, a space of six inches to be filled with sawdust, or any good non-conductor—oat chaff may be preferred, as it will not heat.

c, c, c, a space around the sides and bottom of preserving room *e*, four inches wide, made tight by having the boards plowed and grooved, to prevent any circulation of air, thereby rendering it a superior non-conductor, cutting off all possible communication from the outside atmosphere, and thus surrounding the preserver with a cool dry air.

d, a tight, tin or metallic floor laid on slats, supported on joists (slightly raised in the centre to throw the waste water to the sides), passing over the chambers *c, c, c*, forming the gutters *i, i*, and extending six inches up the sides.

e, preserving room, which can have an open floor, to make two stories, so that the air can have free circulation through it.

f, f, Dropping boards (a few inches below the ice floor *d*, one inch or more apart to allow a free passage of the air; overlapping each other with grooves, to convey the water from the lower side of floor *d*. This water is produced by condensation

from the atmosphere of the preserving room immediately after fresh articles have been put in.

g, waste pipe to conduct the water from the ice floor *d*, which has a bend retaining sufficient water to prevent the warm air from passing into the ice-house *j*.

h, gutter and pipe, bent as pipe *g*, to carry off the water from dropping boards *f*.

i, *i*, gutters in the tin floor over the air chambers, by which they are always kept cool.

j, ice on metal floor *d*, *d*, and non-conducting sides *b*, *b*, to be well ventilated from the top.

k, outside door of entrance.

l, trap door to cover the well entrance.

m, double air-tight partition, or well entrance, extending down four feet from trap door *l*.

Attachment.—*n*, store room of any size.

o, valve to let the warm air from room *n*, pass to the ice floor *d*.

p, valve to admit the cool air from preserving room *e*. Both valves must be open at the same time.

q, wall of store room.

r, a space filled with saw dust, or chaff, as in *b*, *b*, in the main building.

l, *m*, *k*, entrance of store room as in the main building.

Farmers, with one of these preserving houses, can, at all times, have on hand a general assortment of fresh meats, which will keep during a long time in a perfectly sweet state, as the temperature does not vary with that of the atmosphere outside. Likewise, when butter, eggs, &c., are at a low price, they will keep them safe until the prices advance. Sweet cider can also be kept as long as desired, without fermenting, as well as vegetables without danger of sprouting. If they have no good spring house, a part of the preserving room can be partitioned off, as an excellent substitute.

Chandlers, by this invention, can, in the hottest summer day, manufacture their mould candles in a winter temperature, into which they can slide their frames at pleasure.

The inventor, having constructed one of these refrigerators for his own use, in Philadelphia, was induced to take meat on storage, from the butchers in the neighboring market. The meat was brought heated from the stalls, and put into the room, and the next morning handed out perfectly fresh, cool, and in good condition. A good business could be made of this, and butchers themselves would find advantage, in the erection of such buildings. To those who cure meat in the summer, this plan must be peculiarly useful, and far superior to the old mode of sinking casks in ice. It is more uniform in temperature, not liable to accident, more convenient, and is also admirably adapted for the storage of cured meat.

To *dairymen*, who have heavy cheese and butter dairies, it would be particularly advantageous by enabling them to keep their goods safe, till they are ready to send them to market.

Where milk is kept on sale, as in the city of New York, the churns can be put into the cold room, and a stock can always be kept on hand; or if too much has been received, it can be safely kept until wanted.

By *grocers and provision dealers* a refrigerator on this principle, on a small scale can be erected in any convenient place, in their store, or cel-

lar, and be so arranged, that, with a small supply of ice daily, their fresh meats, lard, butter, eggs, milk, cheese, fruit, &c., can be preserved sweet, and free from flies.

To the *proprietors of hotels*, this invention and improvement in the use of ice, is peculiarly adapted. It can be erected in any part of the establishment, and perishable articles can be purchased in larger quantities, and consequently, at a lower rate, without risk of their spoiling, and also be prepared for any emergency, such as unusually large arrivals of travellers.

THOMAS B. SMITH.

Philadelphia, October, 1848.

APPLE ORCHARDS.

WE are glad to notice at length, that we are getting a right class of men hold of our apple orchards. The subject is becoming reduced to a science; and a man who does not make his trees grow rapidly and produce abundantly, may possibly pass for a worthy, honest man, if not otherwise disqualified for the title, but he must be put down as a great ignoramus, and a most negligent, slovenly manager, so far at least, as the subject of fruit is concerned.

People who pay attention to their fruit trees are sure to make them bear. We have a glorious fruit soil and climate, the best on the face of the globe, and we ought to produce it in such quantities, that every household should be profusely supplied with the choicest varieties throughout the year. The best may be as easily raised as the worst, as the trees of such are not unfrequently the greatest bearers.

Shrewd men, who raise fruit for sale, now generally select one, two, or at most three or four kinds, which are of standard demand in market, good yielders, and proved to grow in perfection where cultivated, and confine themselves entirely to these. They see that they are properly set out, properly manured, the land properly cultivated among them, properly trimmed, and properly managed in every particular, and they are sure to find an abundant supply of choice fruit on their trees in the autumn.

A gentleman within our knowledge, has a small orchard on the Hudson River, of less than seven acres, which produces from \$500 to \$750 worth of apples annually. This is not one year of plenty and another or two of famine, but is a steady, regular average yield. This man does not have, what we hear often called by haphazard farmers *bearing years*, or rather he has no other. And all this is secured by the simplest process, viz: *good management*. He scrapes the trunks of his trees every year, and immediately and before the insects and their larvæ can find a hiding place when thus exposed. He gives them a thorough drenching of wood ashes and hot water, as thick as can be made to run freely from a whitewash brush. This practice, with lime occasionally added about the roots at the trunk, with the management we have before indicated, gives the satisfactory results we have mentioned. After carefully hand-picking his apples, he heads them up in barrels, with a few auger holes in each end, which are then thrown upon their bilge, or sides, and allowed to remain exposed to the weather under the trees, till there is danger of freezing, when they are housed if not previously sold.

AGRICULTURE OF THE CHINESE.—No. 11.

Harvesting of the Tea Leaves.—I have already said that the species of plant which produces the black teas, near Foo-chow, is the very same as that found in the green-tea districts of the north. Being further south, and of course in a hotter climate, the tea plant of Fokien is generally grown at a high elevation amongst the hills. At the risk of some little repetition I will insert an account of my visit to the tea hills of Fokien.

Every cottager, or small farmer, has two or three patches of tea shrubs growing on the hill sides, which are generally planted and kept in order by the members of his own family. When the gathering season arrives, the cottage doors are locked, and all proceed to the hills with their baskets and commence plucking the leaves. This business, of course, only goes on during fine days when the leaves are dry.

The first gathering takes place just when the leaf buds begin to unfold themselves in early spring. This tea is scarce and of a very superior quality, being, in fact, the same, or nearly the same, as that which is made from the young leaves in the green-tea district. The second gathering produces the principal crop of the season; the third crop is coarse and inferior.

Preparation of the Leaves.—When the leaves are brought home from the hills, they are first of all emptied out into large flat bamboo sieves, and, providing the day is not too bright, are exposed in the open air to dry off any superfluous moisture. When this moisture has evaporated, convenient portions of the leaves are brought in and thrown into a round, flat, iron pan, such as the Chinese use for boiling their rice, and are exposed to the heat of a gentle fire which is lighted below them. As soon as this heat reaches them, they give out a large quantity of moisture with a crackling noise, and they soon become soft and pliant. The person who attends to them stirs them about with his hands, and in about five minutes takes them out and puts in a fresh supply. The heated leaves are emptied out on a large round and flat bamboo sieve, which is placed upon a table at a convenient height from the ground, and the process of rolling commences. Three or four persons take a portion of the heated leaves and begin to squeeze and roll them in the manner which I have already described. This goes on for a minute or two, when each person takes his portion and examines the effects which have already been produced; it is then shaken well out upon the table, after which it is gathered up and the operation of rolling and squeezing goes on as before. This is repeated three or four times, and then the whole is shaken well out, on another large flat bamboo sieve, in such a manner as to spread it thinly upon it.

Up to this stage of the process, all the leaves have been subjected to the same treatment. But the tea in this district is now divided into two classes, each of which is treated in a peculiar manner. They are called, in the language of the district, *Luk-cha* and *Hong-cha*. The former seems to be a kind of mixture of black and green, and I should imagine it only made for the use of the natives themselves; the latter is our common black tea.

The *Luk-cha* is prepared in the following manner:—The leaves after being rolled and squeezed, are shaken out thinly, and exposed to the air to dry. Great care is taken not to expose them in this state to much bright sunshine, and hence a fine dry day when the sun is partially obscured by thin clouds is always preferred for this part of the operation. After being exposed for an hour or two, or even longer, as the case may be, for this depends on a variety of circumstances, such as the dryness of the air, or the convenience of the workpeople, they are brought within doors, and the drying process commences. The flat rice pan, in which they are heated, is so constructed, that it can be taken out at the pleasure of the cottager. It is now removed, and a bamboo sieve, exactly the same size, is put into its place, and filled with the leaves. A very slow and steady fire of wood, or charcoal, is now kept up, and the remains of the moisture in the leaves is thus gradually and slowly evaporated. After a few minutes, the sieve is lifted and placed in one of a larger size, with a closer bottom. The leaves are then well shaken up and turned over, and any of the smaller tea which falls through the open sieve, during the operation, is thus collected in the under one, and carefully saved. Both sieves are now placed over the flue, and the leaves carefully watched and turned frequently, for about an hour, when the tea is considered properly fired. Sometimes, if the day is fine, it is exposed a little while to the sun, before it is packed away.

The *Hong-cha*, or our common black tea, is prepared rather differently. In the first place, the natives seem more particular in the rolling process, especially when it is for the foreign market, although the operation is performed much in the same way. After heating and rolling, the leaves are shaken out on large screens, and subjected to the action of the open air; the natives in this, as in all other cases, taking care not to expose them to a bright and burning sun. This is a most important part of the manufacture. The black tea is left in this state sometimes for two or three days, before it is fired, which, doubtless, is one cause why the color of this tea is so much darker than those kinds which are prepared from the same plants and quickly dried.

After being exposed for a sufficient length of time, to the action of the air, the leaves are taken in for the purpose of firing. Instead, however, of being heated in baskets, like the other kind, this is thrown at once into the pan. An old and experienced person takes his place at the furnace, and keeps up a slow and steady fire, while it is the duty of the younger branches of the family to keep the leaves in the pan in continual motion, and prevent them from being burned. This is done by means of little hand brushes, made from the prolific bamboo, the outer, flinty part being spilt for this purpose. The tea prepared in this manner soon becomes of a dark color, and is quite different in appearance from the *Luk-cha*. After it has been sufficiently dried, it has, of course, to undergo the other operations of sifting, picking, and dividing, before it is fit to be packed up for a foreign market.

From hence it appears, that the black tea is rendered darker in color, first, by being longer ex-

posed to the air, in a soft and moist state; and, secondly, by being subjected to a greater degree of fire heat. With regard to the green teas, there can be no doubt that those used by the Chinese themselves are of the genuine color which they acquire in the drying; and that those "blooming" kinds, prepared to suit our depraved tastes, are, one, and all, dyed. Moreover, in conclusion, I may repeat, what I have already proved, that the black and green teas of the north are produced from the same species, the *Thea viridis*, and that the true Canton teas are manufactured from the leaves of the *Thea bohea*. It therefore follows, that the black teas can be, and, in fact, are made from both species; and, with regard to the green, as it is the result of a dye, the Chinese, I doubt not, could substitute for that color either red or yellow, should our taste change and lead us to prefer more glaring tints!

There are several different kinds of scented flowers, which are grown in particular districts, for the purpose of mixing with and perfuming the tea. Amongst these I may mention the following:—*Olea fragrans*, *Chloranthus inconspicuus*, *Aglaia odorata*, &c. I believe these flowers are dried by themselves, and afterwards mixed with the teas.

VENTILATION ESSENTIAL TO HEALTH.

THE bad state of the atmosphere of stove-heated rooms cannot be cured by any amount of steaming water. Ventilation is what is wanted, and what is always found wanting, and what renders the atmosphere of our churches and other public rooms so often so unfit for human respiration.

Rooms should not be "*frequently ventilated*," but *always* so. Every tight room should have a ventilator constructed in the ceiling, to answer the purpose of the good old-fashioned fire place, of keeping up a constant circulation of air.

Some one in your pages, I think, has said that "stoves were great savers of fuel, at the expense of human lives"—all of which is for the want of ventilation. It is a most serious fault in the construction of nine tenths of all the school houses that are heated by stoves, that there is no *ventilation*. I have no doubt but thousands of children in the United States are annually sent to a premature grave by diseases contracted, aye, created, in school rooms. If our wise men, who sometimes make very foolish laws, would enact that every school room should be so constructed as to remedy this evil, they would for once show the world they possessed some feelings of humanity at least. Daniel B. Thompson, of Montpelier, Vt., author of "*Locke Amsden*," is worthy to be remembered by every child in America, for the beautiful manner in which he has illustrated the subject of ventilating school houses.

SOLON ROBINSON.

Crown Point, Ia., Sept., 1848.

DRINK AND DISEASE.—It is remarkable that all the diseases caused from drinking spirituous liquors are liable to become hereditary, even to the third generation, and gradually increase, if the curse be continued, till the family becomes extinct.—*Dr. Darwin*.

WHEATEN GRITS, OR CRACKED WHEAT.

WE have often spoken of the great value of cracked wheat mush, as an article of diet in constipation, and, in fact, for all persons, whether sick or well. Have the best of wheat—of good, plump, matured grain. Wash it if necessary. Have it cracked coarsely, in a mill that will cut rather than crush it. The less you have ground at a time the better, for the fresh-ground article is the best. The wheat should be boiled in pure, soft water (rain water is excellent, and if people were half as particular in obtaining water as tea, coffee, tobacco, and a thousand other useless and pernicious things to please the palate, they would always have enough pure soft water). Boil this an hour at least, and two hours is still better, for the more we cook farinaceous food the better. Eat this once, and better, two times a day as a regular meal, with a very moderate portion of milk, stewed fruit, honey, sugar, or molasses. But be very careful as to any or all of these condiments. If too much milk is taken, the head is oppressed, because of the stomach's too hard work; and so of the other articles, particularly sweets. This wheat, then, is one of the best possible forms of food for people, either sick or well.

The family of one of our patients has experimented a good deal, of late, upon making brown bread. The form that suits them best is that made by boiling the cracked wheat at least for two hours. This is then made into small cakes, with the use of a sufficient quantity of fine flour to make the dough adhere properly. The cakes are then baked without salt, yeast, or any addition whatever, and are much relished. It is one of the most foolish things in the world for a person to eat superfine bread, when he can possibly get any other.—*Water Cure Journal*.

HINTS FOR THE PROMOTION AND MAINTAINANCE OF HEALTH.

THERE is really no one subject of greater importance to our farming population, and indeed to the whole community, than providing well ventilated sleeping apartments. It is often asked why the human race degenerates—or why it is seen in so much more vigor in the wilderness, or prairies occupied by the huntsman, or the rude cabin tenanted by the hardy pioneer? The first—degeneracy of the race—we do not credit, but believe at the period of the general limitation of life to threescore years and ten, if not from the creation of man, his stature and physical powers have been, in the best specimens at least, essentially the same. All human tradition, all authentic history go to confirm these views, nor are they discredited by any researches of science or the relics of any of the handy works of ancient art. But the latter we daily witness in the lengthened limbs and stalwart forms of many of our western inhabitants, and such of our farming population as have, *through successive generations*, enjoyed a full, and at all times, night as well as day, a free circulation of pure air.

Food, undoubtedly has much to do with this healthy development, and in two ways, positively as well as negatively—for it should not only be good and unstinted, but it should also, *not be in*

such variety and profusion, and so temptingly prepared, as to lead to excess, by which the physical as well as the mental powers become choked, vitiated, and stupified.

But we deem a pure, healthful, and free circulation of air the principal agent in producing longevity, health, hardiness, and size. Excepting farmers, we have few *classes* of men in this country, hereditary in their occupations, from whom we can draw general conclusions on this subject, but we have an accumulation of evidence from abroad, where society remains unchanged for centuries, which go to establish these views conclusively. The shoemakers, the tailors, the silversmiths of the old world, generally, and almost without exception where these trades have been perpetuated from generation to generation, have been diminutive and diseased. The blacksmiths, the carpenters, the yeomanry, the soldiers, and gentlemen have been generally healthy, strong, and long-lived. It is not to be apprehended, that our rural population will not get their share of healthful breezes during the day. The danger is, and we have too often seen it even among intelligent and thriving people, who ought to know, and can afford to provide better, that from six to eight hours of each day (one fourth to one third), of their whole lives are spent in close 7 by 9-foot boxes (kennels or vaults would be an appropriate term for them), where not a breath of air is admitted through the night, and sometimes, scarcely through the day. Much as the damp and chilling influences of an unroofed exposure to the night air are to be deprecated, they are hardly more so than such a total exclusion of the second great element in the order of creation. Air was made, unstinted as light and water, and much more available than either, that it might be enjoyed in all its healthfulness and purity by every descendant of Adam. It can't be taxed like light in England, nor can it be doled out at so much per head, per quarter, as the Croton water, by our city fathers. Whatever may be the case with *free soil*, *free air* may be enjoyed by every man, woman, and child, who can erect a shanty, a log house, or a mud cottage on the surface of the earth. A draft of night air, over the bed, unless it be dry and temperate, as it is frequently found in latitudes far south, and in peculiar seasons and localities, is always objectionable; but free circulation through the apartment is absolutely essential in all rooms of moderate size, or even in large ones, when occupied by two or more persons.

We once knew a family of seven or eight children, one half of whom, during boyhood, occupied the unfinished upper story of a building, through which the air poured in torrents, and often covered their beds with the wintry snow; the others occupied low, close apartments. The former are now in the enjoyment of an advanced and vigorous manhood; all the latter reached the grave before they attained maturity, the result undoubtedly of vitiated air acting upon the susceptible membranes of the lungs, and producing that loathsome disease we call consumption.

No matter, how cold the weather, let in the air, and let it in profusely. Pile on the clothing if necessary, but do not exclude the atmosphere. It comes fraught with the quadruple blessings of

health, vigor, pleasurable existence, and longevity. "We breathe freer and deeper," was the announcement of a glorious triumph to his delighted audience, by the profoundest genius of the age; and he thus happily characterized a mental and moral, by a physical, enjoyment equally unequivocal.

Close and confined air depresses the spirits and clogs the vital energies. A steamboat might as well make head way through a quagmire, as a man retain his health and vigor in a stagnant or vitiated atmosphere. My limited space will not permit me now to tell you why, but you can learn it from every elemental work of chemistry or physiology.

Light and heat, freely admitted through our sleeping apartments, seem equally essential to health, as a free circulation of air. It has been found, even in a sultry climate, during epidemics and diseases, the result of intense and long-continued heat, that the inhabitants of those buildings occupying the north sides of streets, and thus having a southern exposure, through which the rays of the sun were admitted, were the last to be attacked by disease, and suffered the least from its effects.

It is of the greatest importance to open the windows and shutters to their utmost capacity and let in the fresh morning sun and air. Get out of the bed rooms yourselves, at the earliest dawn, and let the air and sunlight take your place. Bathe in the fresh morning air, abroad, while it is renewing the healthfulness and comfort of your room for the coming evening. You will thus be refreshed and invigorated for the duties of the day, and be doubly prepared for the refreshing influence of sleep at night. There is no more healthful practice than the old one handed down by the descendants of the Puritans in our rural districts, of hanging or spreading out the bedding to the uninterrupted rays of the sun during a portion of the day.

A shower bath, or ablutions with cold water, applied in any way, by the hand, or with a sponge or towel to every part of the body, which is then thoroughly rubbed dry, if steadily pursued every morning, will tend greatly to the avoidance of colds and disease, and the preservation of health. This is always safe when a glow follows the friction of the towels, and unsafe when the system remains permanently chilled by the application.

These few hints, if rigidly observed, and accompanied by a moderate indulgence in plain, wholesome, and nutritious food, at regular periods (the absence of high-seasoned viands and stimulating drinks); full, regular, but not over-strained exercise, cheerful spirits and a mind at peace with itself and all the world, will ensure the full measure of life and enjoyment allotted to humanity.

R. L. A.

New York, Sept. 12th, 1848.

USES FOR CORN HUSKS.—The outside husks of Indian corn, neatly platted, with the braids stitched together from the centre to the edge, make excellent, durable door mats. The inner husks when coarsely hatched, and freed from the end of the cob, can be made into comfortable mattresses, that many people prefer to those made of curled hair; also, into fragrant pillows, sofa cushions, &c.

AN OLD HOUSEKEEPER.

TEXAS WHEAT.

WE have learned from a gentleman from Corsicana, in Limestone county, that about forty thousand bushels of wheat have been raised in Limestone and Navarro counties this season. A part of this was harvested as early as the 9th of May, and is of an excellent quality. The grains are plump and large, and the wheat, it is believed, will average over sixty pounds to the bushel. We understand that a large quantity of wheat has been raised in Trinity Valley above Dallas. The experiments in the culture of this grain, indicate that the whole region, watered by the Trinity and its tributaries above Smithfield, is as well adapted to the culture of wheat as the best wheat-growing regions in the middle states. The soil, in that section, contains a large proportion of lime, and it is probably owing to the presence of this mineral that it is better adapted to the culture of wheat than the soil near the coast. We are confident that there is a belt of country extending quite across Texas from Red River to the Rio Grande, and including most of the undulating region of that country, that is as well adapted to the culture of wheat as any portion of the Union. This section comprises at least thirty millions of acres, and may, at some future day, yield breadstuffs sufficient for the consumption of more than ten millions of people.—*Telegraph.*

REVIEW OF THE JULY NUMBER OF THE AGRICULTURIST.

The postage upon this paper is stated by the editor, to be one cent to any distance within the state of New York, and one and a half cents to all places beyond. If this is so, then I am behind in my reckoning. It used to be one cent to all distances within one hundred miles, as well as within the state. In regard to postage, the people of these United States should make a vigorous effort to have one more reform law passed. We want a uniform letter rate of five cents, and newspaper rate of one half cent, when prepaid, and one cent when not prepaid. All letters originally deposited in any office in this country, to be prepaid; and the word "free" to be *absolutely unknown*. With such a law, the Post-Office Department could sustain itself, and if it did not, what then? Does the War Department sustain itself? There would be more reason and justice in requiring it to do so, than there is in requiring the poor, hard-working laborers of the country to help the Post-Office Department to pay all expenses, by levying an onerous tax upon their correspondents, while that of all the "eight-dollar-a-day men" is allowed to go free.

Uniting the Farmers' Cabinet with the Agriculturist.—Annexation is the order of the day. I hope this will prove more profitable than I view some others. And I hope this arrangement will not only be profitable to the old subscribers of the Cabinet, but that my very worthy and much-esteemed friend, Josiah Tatem, will also have a share of the profit of the union. I am aware that the publication of the Cabinet has not been profitable to him of late.

Time for Cutting Wheat.—I would always cut wheat at the time known by farmers as "in the dough." Much experience has satisfied my mind

that the grain will be heavier, the flour sweeter, whiter, and more abundant.

Management of Cheese Dairies.—This report of Mr. Fish is a very interesting one. As to salting cheese, I wish he would state his opinion in regard to its being badly injured by using common New-York salt. It is my opinion that much of it is utterly unfit for this purpose, and yet a great many persons still continue to use it. While upon the subject of cheese, I will notice a very short and rather caustic article from an old correspondent of yours, whose name we do not very often see of late. Is he afraid of Reviewer, or is he in a pet because I blew up his "balloon" once. I thought Mr. Robinson the last man to take offence at a little joke, and really, I hope he will give me a chance at him again. I can assure him that I have been quite a constant reader of his articles for many years, and should like to continue. Indeed, I have been sometimes tempted to treat "Yankee Farming" as from his pen. If I mistake, I am sure the real author has no occasion to ruffle his feathers at the comparison. But about cheese making at Chicago. Is it possible that there is not cheese enough made in that great region of grass, to supply home consumption. If so, I do not wonder at the sneering remarks of Mr. Robinson. I wonder if this article is not a small clipping of a larger one? It looks like it.

Adulteration of Food.—I am well pleased to see that the able pen of the editor of this paper has become engaged in the discussion of this most important subject. And I hope that he will continue the numbers, and particularize every species of cheating, till he makes one of the most valuable series of papers ever published. I certainly approve of the law spoken of as about being passed by Congress to suppress the importation of adulterated drugs, and would willingly subscribe to have it made as stringent as that of Prussia, in regard to adulterated food. But after all, the law would be ineffectual without a change in the public mind. That must be wrought upon by editors, and I hope the promised articles upon this subject, will lay the foundation for such a change. It surely is time. The evil is almost past belief.

A Curious Fact in Butter Making.—On reading this little article to my *frau*, she corroborated the observation of Professor Johnstone, in every particular. In fact I had been long assured that milking cows in winter, more than once a day, costs more than it comes to. Cows that are milked in winter for butter, will, I am satisfied, yield as much from one milking, regularly each morning, as if milked twice a day. It is well worth carefully experimenting upon.

Dimensions of Apartments.—There never was more truth and good sense crowded into eight short lines, than there is in these, which say that no lodging room should ever be less than 10 by 14 feet, and 8 feet high. In fact, it is one of the greatest faults of modern buildings, that many of the rooms are only just about the size of a modern travelling trunk.

Cultivation of Cotton in China.—It appears by this article, that Whitney's cotton gin has never reached that country; and probably if it should, it

would be torn in pieces by the ignorant population, as Jacquard's loom was in France, and some of Arkwright's first spinning machines were in England. Such is the prejudice of ignorance in favor of old customs; for instances of which we need not go to Europe nor China.

Utility of Wasps and Hornets.—Then why do we keep up the constant war of extermination against them? Is it for the same reason that we kill bats, spiders, and toads, so that we can have more flies and bugs to scold about?

Letters of R. L. Allen, No. 5.—In speaking of swine in Louisiana, Mr. Allen says: "Could the meat-pickling apparatus be perfected, so as to be successfully applied here," &c. Are we to understand from this, that Mr. Allen is of opinion that said apparatus is not yet so perfect that meat could be salted with it so as to be safely cured at New Orleans? [Yes.] I had until now, always supposed that it might be; but I am not so sure that it would be profitable to raise hogs in that vicinity for that purpose, when all the vast region of the valley of the Ohio and upper Mississippi, can do the thing in "the natural way," and send their bacon to the New-Orleans market to be sold at about the same price by the cord, that cord wood is. I don't know about competing with the Suckers, Hoosiers, and Buckeyes.

Hot Water for Trees.—To be used with care and proper judgment, without any danger. In the case detailed by Mr. Bacon, of boiling water poured from the spout of a tea kettle upon the locust, it is worthy of remark that this tree will bear greater heat than many other trees. And I would recommend his plan of getting rid of the borer to be pursued. I should have no hesitation to use lye boiling hot, instead of water; and I have no doubt that will be found a perfectly safe and certain remedy for the peach worm. It is probable that a small boiler, with a convenient steaming apparatus, would be found preferable, and more speedy in its application. There is no danger of killing the tree, unless used very excessively.

Cisterns.—Dr. Philips says that since families of his acquaintance have used cistern water, they have been much more healthy than when using *other water*. Will Dr. P. be kind enough to state what kind of water they used before? Whether from springs, wells, ponds, or streams, or all of them, as I know is common in some parts of the south. And what is the quality of water in the wells of your neighborhood, Doctor, hard or soft? Does your cistern water ever get an unpleasant smell, and how do you cleanse it for drinking? Of course you have no ice. How, then, do you cool it? Or do you, like myself, condemn the extravagant use of ice, as unnecessary? The meaning of the word *moderation*, seems to be lost. If it were not for that, I would not set my face so strongly against tea and coffee, and everything that is equally poisonous and intoxicating when used immoderately.

Navy Butter for Foreign Stations.—This matter all lies in a nutshell. The idea that none but Orange-county butter will keep, which is the opinion of "the gentleman who has special charge of this department," is an idea that convinces me that he knows no more about the principle of

butter making, than thousands of persons who annually manufacture and send to market a great many barrels, tubs, kegs, and pots, of a substance obtained from milk, which might very properly be termed "cow grease." Butter, which is the oily part of milk, and nothing else, and which, if made agreeably to an article in the June number of this paper, whether in Orange county, or any other county of the northern states, where sweet feed grows, and packed in an air-tight vessel, will keep sweet as long as the navy of this government will need butter, whether made "in the mode of *Irish rose butter*," or in the mode directed by good sound common sense, which it seems that some gentlemen, in official stations, do not possess in a very superlative degree. I think I have seen enough of Irish butter making, to know something of it, as I once made a long tour through that country; and when master of the good ship —, often touched at Irish ports. It is no wonder that the gentlemen corresponded with, although extensive dealers in Irish butter, "never heard of *rose butter*," because it is only a local term in the neighborhood of Waterford, to indicate butter fresh churned in the spring of the year. It originated with a celebrated butter maker there, stamping her lumps for market with the representation of a rose. If every other county is to be prevented from sharing in the trade of butter for the navy, through the whim of "the gentleman who has special charge of this department," unless he can smell an "Irish rose" from Orange county, it is high time that that gentleman was "turned out to grass," until "a rose, by some other name, would smell as sweet."

Do Lead Pipes Injure Water?—This question is so fully and fairly answered by the editor, that it is worth while for every person who is in the least interested, to turn back to page 215, and read that article again. Or it may be fully understood that lead pipes, in all limestone regions, are as innocuous, and perfectly free from danger, as a clean tin pail. The white film with which they become coated, will never dissolve nor change through long ages of use. But if any have doubts, let them use iron. The prices of cast or wrought iron pipes, are now so low, that they are easily within reach, so far as regards cost.

Wire Fences.—Has anybody tried the experiment of fencing the almost boundless prairies of the west with iron? It seems to me that if people would only quit the barbarous fashion of letting hogs run at large, that these fertile lands might be fenced with iron very advantageously. And certainly in all the old-settled regions of the eastern states, such fence could be as cheaply built as any other that would be equally good, while it is to be preferred for its beauty. What can be prettier than beautiful yards, gardens, and lawns, inclosed with wire fence? or what can look worse than an old rickety wooden one? I hope to live to see much of the latter give place to iron, even including the posts of the same material.

Superiority of Wool Mattresses.—Superior to what? So far as health is concerned, they are certainly superior to feathers. But wool is not superior to hair for luxurious comfort, nor for health; and certainly it should not be for cheapness. For the coarsest kind of wool is good for some kinds

of manufactures, while hair is of but little use aside from mattress stuffing. Then again, if cotton does not make so good a mattress as wool, it certainly makes a very good one; and so does what is usually called Spanish moss. I have one of the latter that I brought from the south, and slept upon for twenty years; and it is very good yet. Either cotton or moss, must be cheaper than wool, and if as good to sleep upon, where is the superiority?

Various Uses to which Glass may be Applied.—Some of these uses are singular enough. But one great question would be as to the expense. Glass milk pans I should approve of, but doubt the economy of "glass rolling pins." So I should of glass roofs, while other equally good or better materials are so abundant and cheap. Where it is needed for light, of course the expense is not to be considered; but it is hardly necessary to use glass for coffins, on that account. And I cannot conceive that glass chairs would be superior to iron, or a glass table, or sideboard, much superior to good solid mahogany. I wonder the writer did not recommend glass wagon wheels. [He is going to do this when he gets on his glass coat and boots, now making.]

Letters from Abroad.—Who is F. R. S.? I should like to know the name of a writer of such very interesting and instructive letters. I never have read anything about wine making with more satisfaction than these letters. But I cannot help thinking that Yankee ingenuity would find other means to bruise the grapes, besides all this treading of men's bare feet. [Probably, but recollect he is describing how it is done in Portugal, not how it will be done in Yankeedom at some future day.]

Meeting of the Royal Agricultural Society of England.—Much of the conversation reported at this meeting is so interesting and applicable to this country, that it is well worth a more careful perusal than many have perhaps bestowed upon it. The subject of what is the proper time to remove colts, calves, and lambs from sucking their mothers, is a subject that has been entirely too much neglected in the discussions of farmers' clubs, and in agricultural papers in this country. The idea, too, of making charcoal from sawdust, is well worthy of discussion.

Death of Turpentine Trees.—What a subject of melancholy reflection. That not only single trees, but whole forests should perish by the attack of such an insignificant insect, which, when seen separate, seems quite beneath our notice. And it seems that in the very district where the ravages of the insect have been most fatal, that "no satisfactory knowledge of the cause has been obtained, nor remedy found." The remedy will be much harder to find than the cause. The evil is certainly a serious one. Why does not the state of North Carolina offer a prize of \$10,000, or some such liberal sum for a remedy for this disease? or is it an unconstitutional subject? or one beneath the notice of a wise legislature?

A Cheap Paint.—If this article is what it purports to be, it is well worth my while to call the reader's attention to it again. Mr. Boyle does not say whether it is calculated for outside painting or

not. This is important to know. Please to ask him to inform us.

Color of Eggs.—The color of egg shells is not alone affected by what they eat. The color of the yolk can be changed from a bright orange to almost white, by a change of feed. The richness of the eggs, too, can be affected as much as can that of milk, by a corresponding richness of feed.

Ginger Syrup.—I thank "E. S.," for a most excellent drink for warm weather. But I must differ with her about using water in butter making. I cannot believe that the flavor of butter can be injured by the free use of cold water. But we won't dispute the point.

The Interesting Dairy Experiment, noticed under the head of Foreign Agricultural News, I am not quite satisfied with. I hope the experiment will be repeated in various places, and the results published. It is worthy the attention of butter makers to know the exact depth at which milk should be set to cast up the greatest amount of cream. Several other articles I would gladly have noticed, but I fear that your readers will grow tired of taking these doses, although homœopathically administered. Yet from the absence of any scolding on their part, I am in hopes that they are still pleased with these monthly meetings with your

REVIEWER.

JUST TRIBUTES SHOWN THE OX.

At the eighth annual meeting of the Newcastle County, (Pa.) Agricultural Society and Institute, held in September, 1843, the following just tributes were paid to the merits of "the patient ox," that formed no inconsiderable part of the show in the procession. The oxen of the different "Hundreds" were placed by themselves in different parts of the line, the leading yoke from each Hundred, supported a banner, with an appropriate inscription. The Brandywine Hundred bore the motto—

ECONOMY AND UTILITY.

"Our harness cheap, no grain we eat,
And want no shoes upon our feet."

The Christiana Hundred—

THE FAITHFUL OX, THE ANCIENT TEAM OF THE ROMANS.

"With patient, unremitting toil,
We break the clod of every soil."

The Mill-Creek Hundred, with this most appropriate and true sentiment on their banner—

"Our labor pays interest, and our bodies return principle—
The safest of all stock then, for the farmer, is live stock."

The oxen of Newcastle Hundred, were in the rear, and attached to a cart—and the motto on their banner told the story of the faithful creatures who bore it—

"We plow the furrow, and draw the loaded cart,
And die that you may live."

Both living and dead, he is distinguished from all other animals employed by the farmer.

M.

VENTILATION.—In airing a room, both the upper and the lower parts of the window should be opened, as the bad and heated air, from its lightness, will pass out at the top, and the fresh, cool air come in at the bottom.

AGRICULTURAL BOTANY.—No. 1.

AN Enumeration and Description of Useful Plants and Weeds, which merit the notice, or require the attention of American Agriculturists, by William Darlington, M. D., is the title of a neat volume of over three hundred pages, and contains the following modest dedication:—

"To the young farmers of the United States, this humble attempt to aid, and persuade them to cultivate a department of science essential to an enlarged agriculture, and indispensable to an accomplished yeomanry, is respectfully dedicated by the author." The work was printed by Edward C. Darlington, son of the author, and is a very creditable specimen of Lancaster, Pennsylvania, typography, which was published in Philadelphia, in the early part of the summer of 1847, by J. W. Moore, 138 Chestnut street.

More than a year has passed since it made its appearance, and I have waited with feelings of mingled surprise and disappointment for an able and more experienced pen than mine to make its merits known to the agricultural community, for whose especial benefit it was intended, though its usefulness is by no means confined to that class of readers; but except a very short and unsatisfactory notice of it, in the November number of Silliman's "Journal of Science and Arts," no mention of it has yet met my eye; and even this useful journal, I am sorry to say, does not appear to appreciate it as it should, nor is it in general circulation among the mass of farmers, who are apt to look with a suspicious eye upon all works of a scientific character, and therefore leave Silliman's invaluable journal to men of science, as if to them it should be exclusively restricted. Moreover, as the notice above referred to, does not convey a just estimate of the merits of this highly useful, but unassuming little volume, I am at length impelled by the deep interest I take in the advancement of the science of farming, to call public attention to a book which needs only be known, to be sought with avidity, and placed in the hands of every man who wishes to be acquainted with the plants he cultivates, and the weeds he tries, often in vain, to exterminate.

I have the highest authority in the botanical world in saying that "whatever Dr. Darlington undertakes to do, is well done;" and another not less high in the agricultural community, for asserting that "never before has a book appeared, containing, in so small a compass, so much that is of daily, practical use to the farmer and country gentleman, and as yet so little known or appreciated beyond the comparatively small circle of the author's friends.

In the excellent prefatory remarks, when alluding to the still existing prejudices against book farming, the author says: "My views have not been directed to that unpromising quarter. I address myself to the youthful and aspiring agriculturists of our country, who seek to elevate their noble profession to its just rank among human pursuits—and who feel that the exercise of *intellect*, as well as of *muscle*, is indispensable to the accomplishment of their purpose." And again: "It is a great mistake, in my opinion, to suppose that the significant language of our science must necessarily

be merged in the vernacular idiom, or degraded into a local *Patois*, in order to adapt it to the capacities of intelligent, practical men. An active intellect more readily acquires *new terms* appropriate to a science, than *new meanings* of old familiar words; and hence it is that most persons, as they advance in any department of knowledge, are apt to discard all equivocal terms, and substitute those which are definite, technical, and peculiar. Instead, therefore, of *writing down* to the level of boorish apprehension, I would rather see agricultural works generally *written up* to the scientific standard. I would have our young farmers taught to appreciate the importance of scientific precision, and incited to take their appropriate position in the intellectual community."

Were I not afraid of making this article too long, I should like to insert more of Dr. Darlington's sensible, convincing remarks. Indeed, I think a page of your journal could hardly be better filled than with the whole preface, as the best recommendation of the book itself.

Following the preface, is a copious glossary, rendering into plain English all the botanical and technical terms used in the book; then there is an explanation of the abbreviations and references. Next to this, we find the Linnæan classification of the genera, for the convenience of those who are accustomed to investigate plants by that method. Then follows a synoptical view of the general arrangement and grouping of the natural orders to which the plants here described are referable, which are arranged in accordance with the natural system. Upwards of two hundred pages, making the main body of the work, are devoted to clear and minute descriptions, generic and specific; each species further illustrated by interesting observations on the origin, history, and utility or worthlessness, of each plant; proving, in an ornamental, agricultural, or medicinal point of view, the author to be a sagacious observer, and able to speak as a good practical farmer, an excellent botanist, and an experienced physician;—the three departments of science to which he has devoted his long and well-spent life. He does not say it is his intention to describe all the plants that an accomplished agriculturist would wish to know; but to include those only of which no intelligent farmer would willingly remain ignorant.

At the close of the volume, preceding the index of orders, tribes, genera, and species, a few pages are given to an enumeration of all the plants treated of in the work, classified according to their characters and properties. "1. Plants yielding roots, herbage, or food for man; eighty in number, of which fifty-seven are cultivated. 2. Plants yielding food exclusively, or chiefly, for domestic animals; thirty in number, of which ten are cultivated. 3. Plants yielding condiments and drinks; thirty-seven in number, of which thirty-three are cultivated. 4. Medicinal plants; thirty-five in number, of which fifteen are cultivated. 5. Plants employed in the arts, in commerce, in domestic or rural economy; ninety-one in number, of which twenty-four are cultivated. 6. Pernicious and troublesome plants, to be *expelled*; seventy-three in number, of which sixteen or eighteen are particularly pernicious. 7. Plants which are chiefly

weeds upon farms, and ought to be expelled, or superseded by more useful ones; *about* one hundred and twenty species, which infest the farm as mere weeds."

In a future number, I propose to give a few extracts from the main body of the work, as a practical illustration of the correctness of the foregoing communication, excluding the scientific descriptions, and giving only the "Observations."

A FRIEND TO FARMERS.

September, 1848.

ADULTERATION OF FOOD.—No. 5.

Tea.—This useful article is stated to be frequently adulterated after its arrival into Europe, with the leaves of other plants; but the only falsification which appears to be extensively employed, at the present day, is the mixing it with a certain portion of exhausted tea leaves that have been redried and curled, or with damaged and inferior kinds of tea. The leaves which have been found in the possession of the manufacturers of spurious teas are those of the sloe, the ash, the elder, and of the white thorn. These, in some cases, are said to have been boiled, or scalded, with logwood, then rolled up and dried, and a bloom given to them by verditer, or Dutch pink.

Besides these, powdered talc, plaster of Paris, indigo, Chinese woad, prussian blue, chromate of lead, and occasionally carbonate of copper are employed for the purpose of coloring and "blooming" green teas. That most of the above-named substances have been used, is evident, from the fact that cases have frequently occurred, in which parties have been detected in adulterating with the leaves already mentioned; and it has been proved, also, by chemical analyses, that chromate of lead, copper, and prussian blue have been present, and it is well ascertained, by the late observations of Mr. Fortune, that the Chinese finish some of their green teas with finely-powdered indigo, or woad, gypsum, talc, and prussian blue. (See p. 355, vol. vi. of the *Agriculturist*, and p. 304 of the present volume.)

Mr. Warrington, in a valuable paper lately published in the *Memoirs of the London Chemical Society*, states, that, in his researches, he received samples both of green and black teas, imported into England, from China, which were known by the most experienced brokers not to contain a single tea leaf, and which were sold at public sale, in bond, from 1½d. to 2d. per pound. Again, Mr. Davis, in his work on the Chinese, says: "Young hyson, until spoiled by the large demand of the Americans, was a delicate, genuine leaf." As it could not be fairly produced in any considerable quantities, the call for it, on the part of our people, was answered by cutting up and sifting *other* green teas through sieves of a certain size. But the abuse has since become still worse of late; for the coarsest *black tea* leaves have been cut up, and then colored with a preparation resembling the hue of green teas. After speaking of the frauds with spurious and adulterated teas, which the Chinese have endeavored to practise, Mr. Davis observes: "But this was nothing in comparison with the effrontery which they displayed in carrying on an extensive

manufacture of *green teas* from damaged *black leaves*, at a village, or a suburb called Honân."

The remission of the tea duties in the United States, occasioned, in the years 1832-3, a demand for green teas, at Canton, which could not be supplied by arrivals from the provinces. The Americans, however, were obliged to sail with cargoes of green teas within the favorable season, and were as determined to have the teas, as the Chinese were determined that they should be supplied. Laboratories were established for the manufacture of factitious green teas from old or damaged black-tea leaves, which, after being dried were transferred into cast-iron pans placed over furnaces, and stirred rapidly with the hand. A small quantity of powdered tumeric having been previously introduced, gave the leaves a yellowish, or orange tinge, which were ultimately to be made green. For this purpose, some lumps of a fine blue were produced, together with some powdered gypsum and prussian blue. These were triturated finely together with a small pestle, in such proportions as reduced the dark color of the blue to a light shade, and a quantity, equal to a tea spoonful of this powder, being added to the yellowish leaves, they were stirred as before, over the fire, until the tea had taken the fine "bloom" color of hyson, with very much the same scent. One fact, however, is well ascertained and is undeniable; that is, the Chinese themselves do not consume those kinds of green teas which are prepared for exportation.

Chocolate.—This delicious article of food is also subject to vexatious adulteration, which, though not generally absolutely injurious to health, yet much depreciates the chocolate, so treated, as a nourishing substance. Sometimes, however, the falsification is dangerous, particularly when it is adulterated with the cocoa bean that has been spoilt by sea water; and hence it is as much altered in its chemical and other characters, as the bean of coffee is under the same circumstances. Besides the above-named substances, chocolate is adulterated with flour, potato starch and sugar, with coconut oil, the inferior kinds of butter, lard, mutton suet, and even tallow.

If, in breaking chocolate, it is gravelly—if it melts in the mouth without leaving a cool, refreshing taste—if, on the addition of hot water it becomes thick and pasty—and lastly, if it forms a gelatinous mass on cooling—it is adulterated with flour, or potato starch.

Again, when chocolate has a kind of cheesy taste, animal fat has been added; and when very rancid, when it has been exposed for some time to the action of the air, in a tolerably warm place, bad butter, and either vegetable oil, or even the seeds themselves from which the oils were extracted, have been made use of in the sophistication. If the chocolate be very bitter, the bean has either been burnt in the roasting, or it has been impregnated with sea water. In either case, the product is unfit for use as an article of food.

The mineral substances employed in making up chocolate, are some of the ochres, both red and yellow, together with red lead, vermilion, sulphate of lime (plaster), chalk, &c. Chocolates so adulterated, more especially with the preparations of lead, are highly injurious to health. It is only the in-

ferior kinds, however, that are thus made. In order to detect earthy matter in chocolate, a considerable quantity of the suspected article must be finely scraped and steeped in hot water for some minutes, stirring it well during the time. After about a quarter of an hour, the supernatant liquid may be poured off, and the residual matter again treated with hot water until nearly tasteless. The liquid part must then be poured off, and the remainder, or mineral portions, collected and dried.

ROUGH NOTES BY THE WAY.—No. 3.

On my way to Newcastle, in order to take the steamboat, I stopped at the farm of Hon. John M. Clayton. This farm consists of a part of one of those large worn-out estates of which I have often spoken, containing too much land, entirely run out by bad husbandry. It is only three years since he purchased, so that he has only had time to make a beginning. He has set out a large apple orchard, together with considerable other fruit, which appear to be doing well; but he has not been the most successful in planting trees for ornament and shade. About his mansion, which is new and quite spacious, there has been some mismanagement in this respect. No one ever need lose a tree by transplanting.

As to Mr. C.'s politics, it is not for me to say whether I approve or condemn; but there can be but one opinion as to his talents, and I hope they may be brought to bear upon practical agriculture in improving his own farm; and whenever the subject of establishing an agricultural college is brought before Congress, I trust he will be found first and foremost in advocating its importance. I am told he has a son, who has, also, a fine taste for agriculture, with all its modern improvements, now travelling in England, and who, doubtless, will learn, while in that country, something concerning English stock and the manner in which they "do up things" there. Although they may not be applicable, in all respects, to the United States, yet they may create new ideas, and stir up a disposition to make the most of our privileges as well as of our resources.

While on Mr. Clayton's farm, I asked the old colored woman, who appeared to be *mayora generalissima* of the establishment, to show me the hen house. This is constructed of bricks or stone, well stuccoed, inside and out, sixteen feet high to the eaves, and well ventilated, with nests for laying and sitting all round the sides. Well, Dinah, said I, what luck in raising chickens? "Ah," said she, "I've had bad luck with my hens." Why so? said I. You have lots of chickens all about you? "True," said she, "I might have had a great many more. See, how they act—two or three trying to get on one nest—when they run out and steal their nests, they do a great deal better." Here, I will suggest an improvement for the benefit of Mr. Clayton, or any others. I will suppose his house to be thirty-six feet long, twenty-four wide, with a paved or plastered floor, perfectly rat proof. Partition off a room six feet wide, for sitting, the whole length of the building. On each side of this partition, erect a table, or platform, say two feet wide. Then make twenty-four sliding nest boxes, or drawers,

three feet long, eighteen inches wide, and ten inches deep, partitioned in the middle, so as to leave two compartments in each, eighteen inches square. On a level with the tables, let there be cut through the partition an aperture the whole length of the room, ten inches high, or sufficiently large to receive the nest boxes, or drawers, so that one half of each will be in the laying room, and the other half in the apartment designed for sitting, leaving a space of six inches on each table, for the hens to alight and enter deliberately their nests without breaking their eggs. When a hen is disposed to sit, put the eggs under her, and one or two nights after, shift ends of the nest box, so that they will be in the setting room where she will remain in perfect quietude until her brood is hatched. Your readers may make whatever improvement they please, upon my suggestion. I have something similar, myself, and find it works well, saving a great deal of contention among the hens, especially from the annoyance of the roosters when they come off their nests for food.

I find an increasing sentiment prevailing throughout this region, that more barn room is necessary, and that a great deal more is lost in having hay spoil in ricks and stacks, than the interest, and decay on the cost of barns, many large ones of which are now erecting.

The crops all along the Delaware, look well; the lands generally under excellent cultivation, with good fences, mostly post and rail, and hedges, the latter of buckthorn and the Virginia white thorn. The last-named plant, I like much the best, although less thrifty in its growth. It makes a complete low fence, which no animal will be likely to pass, and even it would be impossible to be penetrated by a mad bull. All, however, with whom I conversed, are tired of division fences, which impose an enormous tax of no earthly use. The farms are mostly large, and if any one chooses to pasture his cattle, let him fence in 100 acres, more or less, and sub-divide it into smaller lots by iron-wire hurdles, or some other kind of portable fence, so as to afford fresh pasture to the animals, if necessary, every day in the week. Soiling, however, is decidedly preferable for horses, oxen, and cows; but all young cattle, as well as sheep, ought to be driven to the mountains to summer, as the land along the river is all too valuable for cultivation.

SAMUEL ALLEN.

Newcastle, Del., July 20th, 1848.

BUCKWHEAT CAKES.—The griddle on which cakes are baked should *never be touched with grease*. Firstly, because it imparts a rancid taste to the cakes. Secondly, if a cooking stove be used, it fills the kitchen, if not the whole house, with the smell of burnt grease—to say nothing of the parade, and boasting to one's neighbors, by betraying what we are to have for breakfast. Wash the griddle with hot soap suds; scour with dry sand, and when heated for use, rub it well with a spoonful of fine salt and a coarse cloth. It will then be ready to receive the cakes. After each cake is removed, the salt rubbing must be repeated. If the first does not succeed, try it again, and you will ever after follow this advice of an

OLD HOUSEKEEPER.

SMALL POX IN SHEEP.

At a late meeting of the weekly Council of the Royal Agricultural Society of England, a discussion took place on the small pox in sheep, which is at present prevailing in England and various parts of the continent. Professor Simonds being called upon, made the following statement connected with the symptoms of the malady, and the best means of preventing its extension:—

The disease had long been known in Germany, Italy, and France, and in Paris it had never been entirely extinct; but from the knowledge of its character and experience in the modes of its treatment, especially by inoculation of the lambs when six or eight months old with the true pock matter of the sheep in its mildest form, the loss generally did not amount to more than five per cent., often not one, or even one quarter per cent., while in England, where the disease had already become prevalent in certain counties, and in other localities where the disease was left unopposed in the progress of its ravages, the loss by death amounted to no less than fifty per cent. of the animals attacked by it. The disease, he described, as not epizootic, or conveyed through the atmosphere, but as infectious as well as contagious, having however a limit to the sphere of its activity.

Professor Simonds remarked, in reference to the first indications of the disease, that there were not in this, as in many others, any premonitory symptoms; but that the constitutional and local appearances developed themselves simultaneously. The small pox in the sheep was analogous to the same disease in the human subject. The poison, after having entered the system, either by contagion or infection, lay dormant for a period varying from ten to sixteen days, when an eruption made its appearance on the skin of the animal, in those parts of the body more particularly where there was the least wool, as in the inner part of the thighs and arms; without, however, being long confined to those parts, but soon extending to other parts of the body. This eruption is found on examination to consist of hard knotty bodies, much inflated, and of a florid red color; some of them separate from the rest, while others are accumulated in clusters. It was only when the eruption made its appearance that the animal gave any symptoms of ill health. On the eruption, however, taking place, the sheep separated itself from the flock, drooped the head, hung down the ears, and altogether presented a most peculiar and dejected appearance; the feet and ears being cold, while the rest of the body was feverish; the eyelids became inflamed and swollen, with discharge of tears from the eyes, and mucus from the nostrils. The animal refused its food, and the symptoms went on increasing in severity for three or four days, until the eruption changed its character and assumed a white appearance, arising from the cuticle being raised from the nodules by effusion of the fluid beneath it; at this stage of the disease the animal at once seemed slightly relieved. The white raised cuticle, however, in the course of a few days, put on a brown hue, and became converted in its substance into a scab, or crust, which ultimately fell off, leaving an ulcer more or less deep in the flesh, and occasioning those pitted marks so well known as resulting

in the human subject from a late and severe attack of small pox. The danger to the animal suffering under this disease is dependent on the amount of the eruption present, and also upon the irregularity with which it passes through its various stages; and he agreed with those who recommended a stimulating and nutritive plan of treatment.

Prof. Simonds had no confidence in vaccination (with vaccine lymph), for this disease in the sheep, nor did he believe it could be depended upon as a preventive; however it might be hereafter proved to be of use in mitigating its virulence. He had himself vaccinated sheep, and subsequently inoculated them; in the course of time, the inoculation took effect, and the small pox appeared and passed through its regular stages. He considered inoculation to be the best means of diminishing the virulent character of the disease; and that this plan might be had recourse to even when the disease had shown itself in the flock; especial care being taken to procure lymph from the mildest cases, and to introduce it with the least possible incision, which ought not to penetrate deeply through the skin, but be introduced underneath it, with not more than two slight punctures, behind the ear, as had been suggested, or inside the thigh of the animal. He stated that great care was requisite in effecting this operation, otherwise, if deep punctures were made, a deep sloughing and ulcers would invariably ensue. He recommended, as another preventive, that the unhealthy sheep should be separated from the healthy ones; and, also, that a daily examination should be made of the animals presumed to be healthy, in order that an instant removal might be made of any showing the slightest symptoms of disease.

With regard to the skins of sheep dying of small pox, he earnestly recommended their being destroyed by fire or deep burial in the ground; for it had been ascertained that the virus retained its fatal powers long after the death of the animal, and might again become the origin of fresh contagion.

PLAN OF A PIGGERY.

I FORWARD you my plan of a piggery and other necessary fixtures, which I have in contemplation, and am preparing to put up, on a tasteful and cheap scale, within the reach of every thriving citizen in our state. The cost of construction will depend much on the finish. The ground plan fig. 84, of the two buildings, which includes a yard between them, is 40 feet long and 14 feet wide, which may cost from \$50 to \$90. A good mechanic has proposed to do all the labor, after the foundation is laid, for \$40, the boards to be planed and matched. Unless the buildings are to be painted, I would recommend that the boards be put on in a rough state, and white washed with a composition of stone lime and water lime. To construct a good cellar would cost about \$30 more.

This plan might be enlarged. I have designed it for six fattening hogs, or for one breeding sow and three porkers. "Millionaires" may require something more expensive, but this is sufficiently spacious for the common citizens of Vermont. The two upright buildings, fig. 84, represent the swill

house and piggery. Both are 14 feet long, and 12 feet wide, the posts 10 feet.

The ground plan of the first building contains the arch A, for cooking, where boilers and steamers will be placed sufficiently large to accommodate the number of hogs to be fed. The feeding troughs also, T, T, is included in the same building, which is made of white-oak plank, and extends the whole length of the house, except the space occupied by the tubs, or vats, I, I, which are convenient for the cooked food, swill, &c. One of them may contain the warm food, the other in a

yards, Y, Y, to the feeding trough, T, T. A partition divides the sty, or open yard, and extends across the piggery, forming two sleeping apartments, P, P, and two yards, Y, Y; six doors and passage ways opposite, D, D, D, D, D, D. The main door in the piggery opens into the passage, X, 2½ feet wide, for the convenience of the attendant to carry in straw, &c. The open yards may be used for litter, and to manufacture manure; these occupy the space enclosed between the two upright buildings, and are 16 feet long.

The floor of each building and the yard should be flagged with stone, or brick, secured from frost. The sills of the two main buildings are to be raised upon a wall 18 inches. A cellar may be constructed under the first building for the storage of roots; if seven feet deep, will hold 600 bushels, allowing 2,420 cubic inches to the bushel. A convenient wheel and windlass is arranged in the loft of this house, for handling the hogs at the time of killing, and may be convenient for dressing other animals.

There are many piggeries in this state, constructed about 30 feet long and 20 feet wide, which contain all the cooking apparatus, the hogs, grain in the loft, and sometimes a wool room which form a complete nuisance. I am opposed to feeding swine in close buildings, where they make their litter, and cooking food under the same roof. The effluvia cannot be very pleasant for man nor beast.—*Transactions of the N. Y. State Ag. Society.*

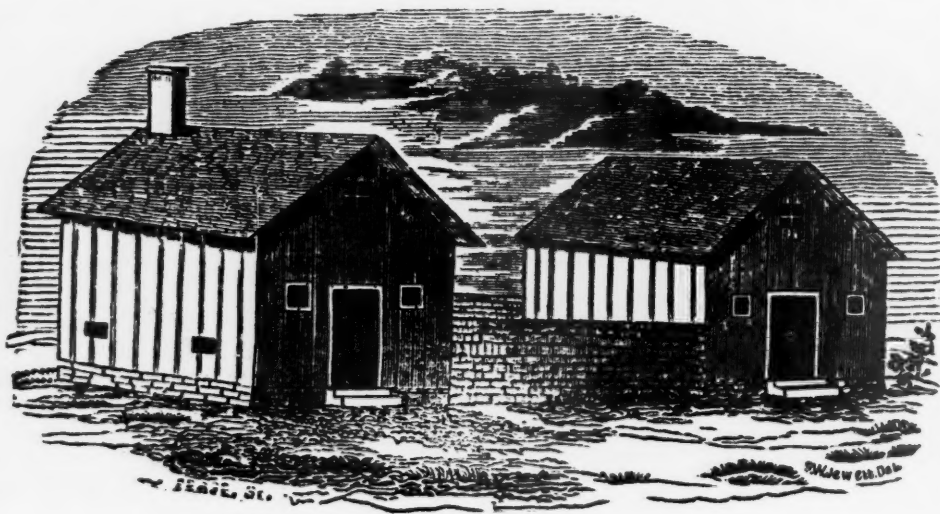
S. W. JEWETT.

Weybridge, Vt., Nov. 15th, 1847.

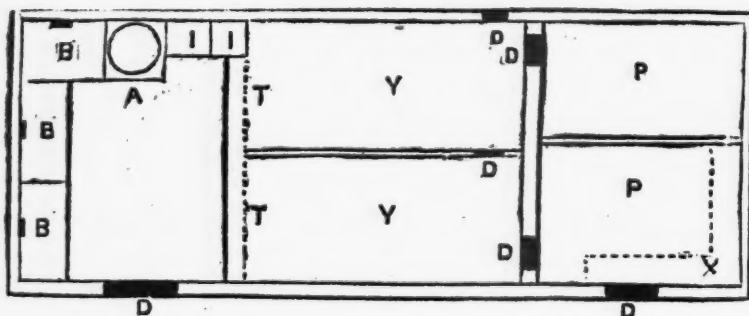
MR. AYRAULT'S TWIN STEERS.

THE twin steers, of which an account is annexed, were fattened by Hon. A. Ayrault, of Geneseo, Livingston county, and were exhibited in Albany, last winter, for a few days. When on their way to New York, they were considered by those who saw them here, as the best pair of fat cattle ever shown in this city. One of the animals was pronounced by the butchers, and others, who are good judges, as the most perfect fat animal they had ever seen, and this animal when killed, fully justified, we are told, the opinion expressed, in the quality of his meat, which was very superior.

They were slaughtered in New York, by Mr. B. Lawrence, of the Centre Market. Their live weight, was 5,522 lbs.—their dressed weight—quarters 3,450—tallow 512—hides 214=4,376 lbs. It will be seen by the description annexed, that they



PLAN OF A PIGGERY.—FIG. 85.



GROUND PLAN.—FIG. 86.

process of fermentation, to be fed at any time. The dots on the yard side of the house and feeding trough, T, T, represent standards of iron, or white oak, arranged along and close to the outside of the trough, at suitable distances to allow the heads of the swine to pass between them into the feeding trough. The sill, on this side of the house, is raised and framed to the posts two feet above the common level of the other sills, and these, standards, or pins, which prevent the hogs from getting into the trough, or house, are framed into the sill above, and the feeding trough; the plank which forms the bottom of the trough may project on the outer side for that purpose, or the plank may be of such thickness as to enter the upper edge.

B, B, B, are bins for apples and roots, in each of which a window opens for the purpose of shoveling them in, two of which are seen in the upright part. The hogs are to lodge in the pen, and can pass from their apartments, P, P, through the

were three fourths Short-Horn—and they exhibited most favorably, the distinguished characteristics of that improved breed, in laying on flesh rapidly and on the most valuable parts, and satisfied all of their

great value for fattening purposes.—*Transactions of the N. Y. State Agricultural Society.*

At the request of the Executive Committee, I



MR. AYRAULT'S STEER, 5 YEARS OLD, $\frac{3}{4}$ SHORT-HORN.—FIG. 87.

transmit some particulars in reference to the cattle mentioned by you. The twin steers, six years old in the spring of 1847, were from the stock of Samuel H. Fitzhugh, Esq., of Livingston county, who derived his improved stock from the herd of Thomas Weddle of Ontario county.

They were got by the bull, *Harry*, who was got by *Rover*, dam *Daisy*, by *Wades Eber*, grandam, *Laura*, by *Marshal Beresford*—great grandam, *White Rose*, by *Seaton's Favorite*, G. G. G. D. *Primrose*, by *Colling's North Star*, G. G. G. G. D. by R. Colling's *White Bull*.

The mother was a remarkably fine animal, both as a breeder and a milker. She was a cross of the improved Short-Horn stock of Philip Church, Esq., of Belvidere, Alleghany county, and the native stock of the country.

Judge Church was among the first who introduced the improved breed of cattle into western New York. It is difficult, for the want of sufficient data, to state the exact proportion of the cross in these cattle, but enough is known to show that it was as high as $\frac{3}{4}$ or $\frac{7}{8}$ of pure Short-Horn blood.

The steers were purchased by me, of Judge Fitzbush, at two years old. That gentleman, in a letter to me of the 3d inst. says, "The steers, while I owned them, received no other care than any other stock. They were, with other calves, taken from the cow at one week old, and received new milk for a week or two, afterwards skimmed milk, until $2\frac{1}{2}$ or 3 months old—then turned to grass, taken up in November, or the first of December, and fed with hay alone until the 10th or 15th of February, then about a pint of meal a day, with a pint of oil cake a week, until about the middle of April, then turned to pasture, and the next winter fed on hay in the field, without shelter."

They did not, at the time of my purchase, present the appearance of being cattle of uncommon excellence, but were considered as fair, average steers. They were domesticated, broke to the yoke, and worked till near five years old. They were always good workers, but were never put to any very severe labor. Their keeping, while thus at moderate work, was not more than I usually give to my working oxen, or other stock. They received hay, with a small quantity of grain from March, till they were put to grass; but the improvement made under this treatment soon evidenced that they were superior animals, and such was their promise, that, in the winter previous to their coming five years of age, they were high fed, and then in the summer afterwards, moderately fed with grain, about six to eight quarts of meal each, per day. For one year after the first of November, 1846, and until the time that I sold them, I gave them the best keeping that could be furnished, making the whole time of feeding about twenty-one months.

The last year of that time, they were kept at the barn on dry feed, averaging about 12 or 14 quarts of meal each, with some carrots, potatoes, pumpkins, &c., and to sustain their appetite in vigor, sometimes ground barley was used, with oats and corn, and sometimes clear corn meal, changing from one to the other. Great care was taken in the quality and preparation of this corn meal, indeed so far as to have some of the corn, kiln dried.

The cattle were never stabled, but usually put up to receive their food, and then exposed to the season with more or less of shed protection. To a roomy yard, with the ground to stand or lie upon,

instead of confinement upon a stable floor, I attribute the great activity and sprightliness of the cattle when at their perfection. Although remarkable for expanding in size, and taking on fat, they were never, what could be called great eaters.

I purchased the steers in the fall of 1843 for the sum of \$60.00

I kept them for work $2\frac{1}{2}$ years, but as their work was not severe, and they only received the ordinary keeping of my stock, I estimate the expense of keeping over work, at 65.00

I then commenced feeding them, and for three fourths of a year, fed but moderately—say, what equals in expense eight quarts of corn meal, for each, per day—being $\frac{1}{2}$ bushel corn per day, for 274 days, making 137 bushels at 50 cents per bushel, 68.50

Add hay, grass, and attendance \$1 per week, 39.00

For the last year, I fed them in the best manner—say, corn, oats, and barley meal about 12 quarts each, per day, and some pumpkins, potatoes and carrots, equaling in expense one bushel of corn—being 365 bushels, at 50 cents per bushel, 182.50

Hay and attendance 50 cents per week, 52.00

\$467.00

This, at a liberal estimate, was the cost of the cattle when sold. I sold them in November, 1847, for \$550 paid down, and a promise from the purchaser, Mr. Calkins of \$100 more, if the cattle turned out well—which promise he has since agreed to make good.

ALLEN AYRAULT.

Albany, April 12th, 1848.

STATE OF AGRICULTURE IN MORRIS COUNTY, N. J.

I AM writing you a line from the heart of one of the choicest farming regions in our county. Here is really model farming, inasmuch as it is *successful* farming, if one dare judge from the well-filled barns, numberless hay and grain stacks, fat cattle, &c. &c., that meet him on every side.

A brief description of real life, and its prospects here, I hope will not be thought amiss. This Troy is a small country place, located on the turnpike leading from Newark to Dover, a distance of about 16 miles. Hay, fat cattle, and milk are not the least important items to which the farmers here turn their attention, and just now they have done haying; almost every spear of grass has been handsomely cured, stacked, or housed, during one of the most splendid seasons ever known, with scarce one drop of rain to blacken the bright straw. This hay is cut in immense quantities every year, averaging about two tons to the acre, and the land never manured, as I can learn.

Formerly, considerable cheese was manufactured by the "gude housewife," but now their attention is turned to the selling of milk, reaping one of the great advantages of having a good railroad within a few miles of the door, to drain the county of its surplus produce, and keep the market supplied with that "dirty, yellowish-looking scum."

One man here, Mr. Hiram Smith, keeps sixty cows, sending to the Morristown depôt, seven

miles, daily, by seven o'clock in the morning, some 2,000 quarts of milk, including a great proportion of cream. One quart of cream is taken from about six quarts of milk. He has a splendid store milk house, erected for this purpose, about eighteen by forty-five feet, through which runs a pure stream of cold spring water.

I venture to say, this place numbers as great a proportion of wealthy farmers, as any other of the size in our county, in which enterprise develops itself in large and handsome houses and barns, the farms generally averaging about three hundred acres, correspondingly neat in appearance.

One word on their method of collecting manures. It is deemed good policy to collect, by fall, large heaps of compost, of ditch scrapings and meadow muck, which are carted to the barn yard, covered with coarse hay, and trodden upon by the cattle until spring, when it is applied to corn. In this way, the land is kept good, uniformly producing remunerating crops.

I am now availing myself of the extraordinary dry weather, and having removed from a low place, at the head of a mill pond, on my grounds, some two hundred loads of earth, that has apparently been, say twenty years in *accumulating*. I wish to inquire the most economical manner of applying it to land, whether lime or ashes mixed with it would be the most likely to be the most beneficial. It seems to me to be a species of bog earth and vegetable matter, that has never known what cropping was, except to grow black alders.

W. D.

Troy, Morris Co., N. J., Aug. 26th, 1848.

PIPES FOR UNDERDRAINING.—SALT MUCK.

In your last number, you invite communications in a plain way, from plain men, and I avail myself of the invitation, coming as I do under this denomination of persons.

You have an article—"Pipes for Underdraining"—by which I learn of the intended importation of a machine from England, for making drain pipes. I desire to say to you, that this summer, I drained 1,864 feet, and procured the pipes and flats made by Mr. A. Price, of Middletown Point, Monmouth county, New Jersey, at \$16 per 1,000 feet at his works. They are the half pipe, such as you see represented in Stephen's Book of the Farm, each pipe about one foot long, and three inches in diameter, inside, of burnt clay. If any of your friends should not be disposed to wait for the machine, this may be to them acceptable intelligence.

I have used a great deal of salt muck to good advantage. I hope to haul up 1,000 loads, this winter, into my barn yard. My first experiment was with a Siberian crab-apple tree, which I transplanted from a place where it did not appear to thrive. The salt muck had laid over one winter, mixed in alternate layers with lime. A hole, about three feet by four and two spades deep, was dug, and filled with this mixture, and the tree planted in the centre. It grew very luxuriantly, full two feet for one, compared with another apple tree (a russet), within the distance of thirty feet, and I have ever since been an advocate for salt muck. T. J.

October 10th, 1848.

THE MOST PROFITABLE BREED OF SHEEP.

WHICH is the most profitable breed of sheep, is a question often proposed—never solved. Many are the reasons given for preference of certain breeds in behalf of different localities, and many experiments have been tried to test relative merits. These have been principally tried on equality of terms, the natural habits of the animals being left out of sight, so that the results have been pretty equally varied and unsatisfactory; no sound conclusion having as yet been arrived at. It is a subject of great interest in itself, and certainly of vast importance to a country so thickly populated as our own happy land. The attention of most of our enterprising and energetic agriculturists have been turned to the increased productions of our arable fields; this is perfectly right, and no one appreciates more highly the great advances made than myself. I am also well aware of the intimate connection between the two, from the increase of animal food on these arable lands; they must go hand-in-hand to a great extent; but if it can be shown that certain animals—a particular breed of sheep, for instance—will produce a more abundant supply of food for man, or clothing for his use, then that is the very breed deserving most encouragement, despite of favored prejudices. I presume not to direct; my object is to promote inquiry. I farm in a district altogether enclosed, and our fields are for the most part of convenient size. Our sheep graze undisturbed; where they feed, there they lie down, and rest in quiet. It is not so with the open field or down farmer; his sheep travel from field to down, from down to field daily. This requires activity; he requires an animal with light, elastic tread. I say nothing of this mode of farming.

Query. What is the loss sustained in fat and muscle by this weary travel? The mountain range appears to require an agile, hardy animal; but have the little animals generally found on these summits undergone all improvement of which they are capable? The bleak and elevated parts of the High Peak of Derbyshire are grazed by sheep of fair size and proportions; and the Cotswold Hills, which are about 700 feet above "sea level," boast the largest sheep in the world. I by no means question the propriety of suiting the animal to the locality or purpose required; but I do seriously object to grazing inferior animals on any pasture, country, or place where a superior can be introduced; to this I desire to direct particular attention, as a subject of no minor importance. I hesitate to give an opinion, but as I occasionally see sheep of every variety, from the little mountain sheep to the gigantic Cotswold, fattening on our best pastures, I will say that, so far as my observation and experience go, they fatten in about the same time; indeed, with animals of the same age, the larger one generally improves the faster. He is more indisposed to exertion, resting more quietly; and in the consumption of food, the balance is not much in favor of the smaller animal; his active habits cause him to eat more, and his restless feet destroy much. I need not stay to prove that an active, lively animal will consume more food than a quiet, docile one; it is an axiom. My impression further is, that the little active one will consume and waste (by treading), as much or even more food than the

large, quiet, docile one; and I invariably find the larger animal to be the quieter one. My own prepossession is in favor of a large breed of animals, as believing that they come to—grow to—a heavier weight in the shortest time, upon proportionably the least food. With the view of exciting discussion on these points, and consequent improvement, I send you the following dimensions of sheep taken at the late York meeting. I withhold the numbers, at least for the present, as I have no wish to come into collision with individual exhibitors. The whole were fairly and carefully taken before the prizes were declared, and in utter ignorance as to whom each animal belonged. I would further say, that I had ample time to make my selection, which, with two or three exceptions, were the largest sheep in each class.

Admeasurement of sheep in class at York meeting, taken before the prizes were declared.

Breed.	Class.	Age.	Girth.		Length.		Height.	
		Months.	ft.	in.	ft.	in.	ft.	in.
Long-wools	No. 1	16	5	1	3	8½	2	6½
		16	4	8½	3	6	2	6
		16	4	9½	3	7	2	6
	No. 2	16	4	8	3	7½	2	5½
		40	5	7	4	0½	2	9½
		52	5	7½	4	1½	2	8½
Leicesters	No. 1	28	5	4	3	11	2	7½
		16½	4	4	3	6½	2	5½
		15	4	2	3	5	2	4½
		16	4	6½	3	5½	2	5
		14	4	6½	3	7½	2	6½
		16	4	4½	3	6½	2	5
		16	4	5½	3	7	2	6
	No. 2	16	4	3½	3	4½	2	4½
		27	5	2	3	9	2	5½
		30	4	11	3	9	2	5½
		40	4	11	3	7	2	6½
		55	5	1½	3	8½	2	6
		27	4	8½	3	8½	2	5½
		28	4	9	3	6½	2	3½
Southdowns	No. 1	28	5	1	3	9	2	6½
		28	5	0	3	6½	2	7
		16	3	10	3	10	2	2½
		16	3	8½	3	7½	2	2½
	No. 2	16	4	1	3	7	2	3½
		16	4	0	3	9	2	3
		55	4	5	3	11	2	3½
		29	4	0	3	9	2	3
		29	4	6	4	1	2	4
		40	4	1	3	9	2	2½

I give you my estimate of the comparative weight of the heaviest sheep in each class of same age, according to my judgment.

Breed.	Class.	Age.	Weight per quarter.	Wool.
		Months.	lbs.	lbs.
Long-wools	No. 1	16	52	14
Leicesters	" 1	16	46	11
Southdowns	" 1	16	36	8
Long-wools	" 2	40	72	15
Leicesters	" 2	40	56	11
Southdowns	" 2	40	46	8

With all deference, I beg to say, that in the

Leicester classes nearly every variety of Leicesters and long-wools was to be found; the pure Leicesters not predominating, and the long-wool classes embraced a very superior Cheviot.—*English Paper.*

THE TRUE PRINCIPLES OF FARMING.

If persons engaged in this pursuit would only use that sense which God has provided them with, and which is generally styled *common*, the business would be divested of a great deal of its mystery. Some people will say that it is much easier to find out what is wrong than to say what is right; and this is true to a certain degree; but regarding the cultivation of the land, there are certain inviolable principles which should always be kept in view; and these I will endeavor to enumerate. The first that strikes me is the clearing of the ground; it is absurd to think of trying to grow grain under trees in a wood, nor is it sufficient to take away a part of them—I mean, of course, with the idea of perfection. For instance, suppose you have 50 trees on an acre; that is, about one to every three square rods; the soil capable of bearing 50 bushels of wheat, or 1 bushel to each tree; and suppose that you cut down 49 of them, you will only be able to grow 49 bushels, instead of 50—the annual waste or cost of that tree being the value of one bushel of wheat, or whatever crop might have been on the 3 rods of ground which that tree monopolized. Therefore, if it is necessary to clear the land before you can grow grain, it is reasonable and self-evident that it should be entirely cleared, every fractional part you leave doing injury in its degree.

The next point to notice is the dryness or wetness of the soil; see if the stagnant water is sufficiently near the surface to do injury to the crops, even by capillary attraction, which, science tells us, will raise water 4 feet—and practice has shown that it must not be nearer; therefore, if the stagnant water be nearer than 4 feet, drain it to that depth. It is absurd to attempt to cultivate land against so powerful an enemy as water. Thirdly, we consider "the pulverization of the soil." Ought it to be pulverized at all? To this question I think our common sense will give an answer in the affirmative, so that the plant may more easily expand its roots to seek for nourishment in the soil, which soil and which pulverization should extend as far as the roots of the plant; but is it common sense to think that 5 or 6 inches only is the distance that the roots of plants extend. I will not take advantage of a few facts that have been noticed of the immense depths that roots descend, but merely appeal to common sense and ask whether it is not reasonable to suppose that the roots beneath extend as far as the plants above the soil, and if so, ought not the soil to be pulverized to that extent, viz. about 4 feet?

The first expense of this, I am aware, renders it almost impracticable; but this I cannot help. I cannot alter the true principles of nature. I must assert with common sense that the deeper you pulverize, the more you move in the right direction.—*W. G. Grossmith, in Gard. Chronicle.*

MEXICAN AND TEXAS SHEEP.

In your July number of the *Agriculturist*, I observe you wished to know something more in relation to the Mexican sheep, what kind they are, &c., in answer to which, I can say that they are a mongrel breed, and generally very coarse-wooled, and but little at that, being quite small and ugly shaped. The old Mexicans say, that many years ago, there were a great many fine-blooded sheep brought into that country from Spain, but for some years past there has been no pains taken to improve them. There seems to be, at this time, a great difference in the quality of their fleeces, some of them being nearly all coarse, while others have only half of their fleeces coarse, and some of them are as fine as the common American sheep. But by crossing them with fine-blooded sheep, in three or four years, we obtain a very hardy and good-wooled race.

You wish to know, if my ewes had two lambs a year. They commonly have two lambs a year, and occasionally two at a time. I have had but one instance of an extraordinary increase of sheep, and that took place about the second year of my raising them. I had one ewe that gave birth to two lambs about the 20th of November. The May following, she had another, and strange to say, the next November she had two more lambs, making five in all, within the term of twelve months, and she had the good luck to raise them all!

SHUBAEL MARSH.

Independence, Texas, Sept. 1st, 1848.

SHADE TREES FOR CITIES AND VILLAGES.—

These are not only ornamental and convenient, but highly useful. So long as shade trees are considered only as a luxury in towns or cities, and contribute solely to the improvement of the taste and comfort of pedestrians, we despair of their general introduction. But since the utility they have proved to be, in stopping the recent tremendous conflagrations in Albany and Brooklyn, we trust they will commend themselves to the acceptance of owners of real estate. But for their presence in both places, the fire would have crossed streets and extended its ravages far beyond the present ruins. When the insurance companies will take risks at 25 per cent. less premium where the buildings are protected by a dense mass of foliage in front, then we may hope to see beautiful shade trees lining a majority of the streets of the cities of the United States.

At the north, October and November are the proper time for planting out trees, when the weather is open and mild; but at the south, December is the proper time, whether the weather be mild or not.

EFFECTS OF DOMESTICATION ON BIRDS.—Professor Low, in speaking of the effect of domestication on birds, says: "They lose the power of flight by the increased size of their abdomen, and the diminished power of their pectoral muscles; and other parts of their body are altered to suit this conformation. All their habits change; they lose the caution and sense of danger, which, in their native state, they possessed. The male no longer retires with a single female to breed, but becomes polygamous, and his progeny lose the power and the will to regain the freedom of their race."

THE ARRACACHA vs. THE POTATO.

THE adaptation of the potato for widely-different climates, when in its former vigorous state, was a very remarkable fact. It has been cultivated from the equatorial table lands to the verge of the polar regions; it produced thirty fold, in 1846, at the manse of Loevaars, in the northern district of Iceland. It is scarcely less astonishing that whilst the arracacha grows side by side with the potato in South America, and there rivals, or even outrivals it as regards amount of alimentary produce, yet its cultivation has hitherto proved almost a complete failure in Europe as well as in Algiers. Experience, and a better knowledge of its habits, may, however, greatly tend to obviate the difficulty.

We can command temperature, regulate both it and moisture, and produce various soils; but we cannot condition the plants as on their native table lands in regard to the density of the air. Contrast-ed with their climate, comparatively low mountain districts are too cold; and near the level of the sea the pressure of the atmosphere is nearly one third more than on the elevated situations where the arracacha naturally grows; for instance, at Bogota, at 9,000 feet elevation, the atmospheric pressure will be upwards of 4 lbs. less on the square inch than it would be anywhere near the level of the sea; and this being the case, evaporation from the surface of the leaves will be proportionably facilitated; for, according to Professor Daniell, evaporation is inversely proportionate, *ceteris paribus*, to the elasticity of the atmosphere. Hence it may be computed that a plant evaporating 30 grains in a given time in the Andes of New Granada, would evaporate little more than 20 grains in the climate of London. The arracacha may, therefore, be expected to thrive best in an airy situation, provided it is not too cold.

DESTRUCTION OF SUGAR CANE BY RATS.

OUR cane fields in this country are so infested with rats, that a very large portion of our crops are annually destroyed by their ravages, notwithstanding all we can do by means of traps, poisons, dogs, &c., and we are obliged to subject ourselves to a considerable expense, by paying our watchmen, by way of premium, a penny per head for every animal they bring us, amounting to several thousand pence per annum, on every estate. They are too cunning to take arsenic and other mineral poisons we set, and we are afraid to use scents to induce them, for fear of drawing them from the distant cocoa walks (where they also do much damage), and the surrounding wood and brush lands where they congregate, to our cane fields.

In the third volume of the *Agriculturist*, page 284, I observe a recipe from Dr. Ure, of dissolved phosphorus, but he does not say the quantity of this fatty compound that should be mixed with (say), a pound of dough, made with half sugar and one half flour. If this remedy is used in the United States, you or some of your correspondents may be kind enough to make it known through your columns, and oblige

A WEST-INDIA SUBSCRIBER.

Granada, Sept. 9th, 1848.

INCREASE OF PIG POPULATION.

THE following table will show the rapid increase of the pig. Supposing the first litter to be when it is 12 months old, and that it has a litter every six months; and that it has an average of six pigs every litter. The sows to be kept in a breeding state till 3 years old, and then fattened off. Average 4 cwt. when killed, and all the hogs to be fattened off by the time they are 12 months old, and average 2 cwt. when killed.

Date of Increase and Sale.	Breeding Sows.	Inc. of Stock.		Stock Sold.		Weight of Fat Bacon in cwts.
		For Brd'ng.	For Fat'ng.	1 yr. old Hogs 2cwt. ea	3 yr. old Sows 4 cwt. ea	
End of 1801	1	3	3			
1802	4	12	12	3	..	
Old sows deducted	7	21	21	3		6
	6	..	..	..	1	10
1803	18	54	54	12	..	24
Old sows deducted	39	117	117	21		42
	36	..	..	..	3	190
1804	90	270	270	54		
Old sows deducted	3	..	..	..	2	246
	87					
Old sows deducted	204	612	612	117		588
	192	..	..	..	12	
1805	462	1,386	1,386	270		
Old sows deducted	21	..	..	..	21	1,308
	441					
Old sows deducted	1,053	3,159	3,159	612		2,968
	999	..	..	..	54	
1806	2,385	7,155	7,155	1,386		
Old sows deducted	117	..	..	..	117	6,786
	2,268					
Old sows deducted	5,247	16,281	16,281	3,159		
	270	..	..	..	270	15,390
	5,157					
1807	12,312	36,936	36,936	7,155		
		66,009	66,009	12,792	480	27,508

At the end of 1807, then there would be of breeding pigs—

612	2½ years old.
1,386	2 years old.
3,159	1½ year old.
7,155	1 year old.
16,281	½ year old.
36,936	sucking pigs.
65,509	
53,217	

118,746 in all, besides the sale of 27,508 cwts. of bacon; and beside—16,281 hogs, ½ year old, and 36,236 sucking hogs.—*Agricultural Gazette.*

RAG WEED.—It has been stated, we know not on what authority, that land, on which rag weed grows, is not suitable for sowing wheat.

THE FLORIDA EVERGLADES.

THE most stupendous public improvement of modern times, is that proposed with reference to the peninsula of South Florida, called the "Everglades."

This region, including two large swamps, one called the "Atsenahoofta," on the western side and the other called the Halpabeoka, on the north-eastern side, and including the large lake Okechobe, covers an area of seven millions of acres. It is now utterly worthless, four millions and a half of that area being usually submerged from two to seven feet. The Pahhayokee, or "grass water," as the Indians call the everglades, comprise between one and one and a half millions of acres of the submerged lands.

The Everglades is a basin of lime rock, and the bottom of it is said to be at least some twelve or fifteen feet above the level of the sea; and the rim of the basin varying in width from half a mile to five miles, lies between the waters of the ocean on one side, and the Gulf of Mexico on the other. Deep tide rivers run from the ocean and gulf up to the margin or foot of this rim. Within the basin are thousands of islands of rich land. The glades are filled with a tall grass from six to ten feet high, the annual decay of which has occasioned a deposit in the water of from two to six feet thick. It is proposed to cut canals, or drains, through the soft rock of the rim into the rivers around it, in which, now, when the waters of the glades arrive at a certain height, they flow through fissures, or depressions, or confined subterraneous outlets. This will, it is said, reclaim for cultivation most of the subaqueous soil, and the two large swamps mentioned, which are overflowed from the glades. The correct quantity of land estimated as reclaimable is one million of acres. The cost is estimated at from \$250,000 to \$500,000. Besides this, it is proposed as a part of the same improvement, to drain five or six feet of Great Lake Okeechobee, nearly 40 miles square, by two canals, each 12 miles long, one into the Caloosa Hatchee, a river flowing into the gulf, and the other into the Locha Hatchee flowing into the Atlantic. In the largest estimate of expenses above given, the cost of these two canals is included. This, it is supposed, will drain some hundred thousand acres of the best bottom sugar land in the south, now valueless, lying on the Kisseme River, which annually overflows, owing to the rise in the Okeechobee, into which it empties.

Mr. Westcott, of Florida, introduced at the late session of Congress, a bill to grant all this region to his state, upon condition that it would drain them. We have before us Document No. 242, of the Senate, containing interesting information on this subject. The Commissioner of the General Land Office, the Secretary of the Treasury, and the Committee on Public Lands of the Senate, have all decidedly reported in favor of the measure; and a very able official report by a gentleman of high character for scientific attainments, who made an examination of the glades, it seems to us demonstrates the feasibility of the project.

The land reclaimed is below latitude 27½°, where there is no frost, and if the project succeeds,

a country larger than the State of Connecticut, can be in five years in cultivation in sugar cane, oranges, limes, lemons, bananas, and other tropical productions that cannot be raised in any other part of "the present United States," to quote the significant language of the gallant Harney.

MILKING COWS.

THIS is a subject of too much importance to be passed over; and I fear that I must add that it is a subject far too much neglected. The milking of cows resolves itself naturally into two heads, viz., how to milk, and when to milk.

How to Milk.—It is astonishing what difference there is in good and bad milking. 1. If every drop of milk in the cow's udder be not carefully removed at each milking, the secretion will gradually diminish in proportion to the quantity each day left behind. This fact is well established, and is to be well accounted for on philosophic principles, as well as borne out in practice. Nature creates nothing in vain, and the secretion of milk in the cow only suffices to supply that daily lost—the milk left behind in the udder is re-absorbed into the system, and consequently the next milking will be so much the less in quantity. But another reason why every drop of milk should be taken away, is to be found in the well-known fact that the last milk is doubly as good as the first milk—hence, if not removed, there is not merely equal, but double loss. 2. Milking should be conducted with skill and tenderness—all chucking or plucking at the teats should be avoided. A gentle and expert milker will not only clear the udder with greater ease than a rough and inexperienced person, but will do so with far more comfort to the cow, which will stand pleased and quiet, placidly chewing the cud, and testifying by her manner and attitude that she experiences pleasure rather than annoyance from the operation. Cows will not yield their milk to a person they dislike or dread. I have taken some trouble to acquire the art of milking, in order that I might be able to describe it. You take the teat in your palm, enclosing it gradually in your fingers, tighter below than above; but not absolutely tight anywhere—a portion of the upper part of the hand—the thumb is uppermost—embraces a portion of the udder, and the whole hand is drawn gently downwards, towards the extremity of the teat, between the thumb and the forefinger; very little practice enables the milker to do this with ease, rapidity, and tenderness. I need not say let the hands be carefully washed before each milking; but I dare say it is seldom thought necessary to wash the cow's teats. This, nevertheless, should be done, and it will then be found that the milk will flow more freely with any teats than if you wet them with the milk; at least, I find it so, and think myself an expert milker.

We now require to consider *when the cows are to be milked*—a question again resolving itself into two minor ones, viz., at what hours, and how often? The ordinary practice is, to milk cows twice daily—at about 5 o'clock in the morning, or, in winter, as soon after daylight as possible, and again at the same hour in the afternoon, thus leaving 12 hours' interval between each milking. Some recommend milking three times daily during the summer months,

stating as their reason that cows are then after calving, and flush of milk, and that the three milkings are calculated to increase the quantity of the secretion. Some even recommend four milkings during that season. There can be no question but that, when fed in proportion, such a constant demand would necessarily increase the quantity of milk secreted; but then it is likely that the same causes might produce such a depression in the secretory system—naturally consequent upon unusual excitement—as would cause a decrease of milk in autumn and winter, in about equal ratio.—*Ayr Agriculturist.*

CORN SILKS.

EVERY farmer knows that corn throws out of the upper end of the ear a bundle of fine threads, called silk. The housewife, who gathers green corn to boil, knows more than this. She knows that about two thirds of the lower end of the ear silks out first—a few days afterwards, about two thirds of the remainder of the ear silks out; and if everything is favorable, the rest of the ear sends out silk, and, at harvest time, the whole ear is covered with corn; but if the third silk does not come out, then the upper end of the ear will be a naked cob.

If grasshoppers eat off the silk as fast as it comes out, as they did in 1831, then the entire ear will be a naked cob. If the farmer plants only that part of the ear that silks out first, will not his corn ripen more all at one time, and also a few days earlier, and thereby save a third part of his crop from destruction by early frosts, if they should happen to come?—*Exchange paper.*

IS IT BENEFICIAL TO HAVE THE GROUND SHADED WHERE PEAR TREES GROW?—For the past few years, the ground on which stand the pear trees of one of our friends, has been under cultivation with small vegetables, or in grass kept short. The fruit from the trees, during this time, has been quite indifferent. The past spring the land was plowed, and the fore part of June sowed with oats, which had a rank, thick growth, and were not cut till the last of August—thus shading the ground very well all summer. The pears ripened mostly in August and September, and were more abundant, freer from defects, larger and finer than ever before known. Now, was it the shade of the oats, the cultivation of the land, or a better fruit season, that caused this beneficial change?

HOW TO KEEP A HORSE FROM STRAYING.—The Icelanders have a most curious custom, and a most effectual one, of preventing horses from straying, which is peculiar to that country. Two gentlemen, for instance, are riding together without attendants, and wishing to alight for the purpose of visiting some objects at a distance from the road, they tie the head of one horse to the tail of the other, and the head of this to the tail of the former. In this state, it is utterly impossible that they can move on either backwards or forwards, one pulling one way, and the other another; and therefore, if disposed to move at all, it will be only in a circle, and even then there must be an agreement to turn their heads the same way.

Ladies' Department.

A DAY TO MYSELF.

OLD LADIES' DIARY.—The stars were still glittering in the clear sky, when I was called to breakfast by my good Betsey, and the wagon was at the door all in readiness to take us to farmer Jones' "Harvest Home." The merry group soon despatched their meal, and left me in quiet possession of the house, with the prospect of a lonely day; but I was agreeably disappointed, for my dear old friend M***, kindly came to bear me company. It has been long since we have enjoyed a day of such uninterrupted communion, and we lived over many hours of innocent pleasure, that had gladdened our hearts when life was new, and hope pointed to a bright future. But this day of pleasure, like all the rest, has passed away. Let me now recall it to memory, and see if it has not been one of profit as well as of pleasure. I think it has. To say nothing of the good that we may derive from social intercourse, when the affections are cultivated, I find myself the gainer in many ways from this day's gossip with my old friend.

As I expected to be alone, I had made but slender preparations for dinner, and so set my wits to work to find the best that could be made with the least trouble, and scanty fare. My mind ran over all the provisions in the house—ham, tongue, salt beef, &c.; but all required too much cooking and preparation for our fancy. I say our, for M. was in my councils, and intended joining me in my homely duties. I thought of many good things that could be quickly done in the frying pan; but M. has a horror of fries, being in her mind synonymous with headache, indigestion, and low spirits, and all the train of evils that attend improper cooking to those who do not work in the open fields. Time was precious with us, and we could not afford to lose an hour in idle ceremony; so we agreed that we could be as agreeable to each other in the kitchen, as in the parlor. The pantry afforded nothing but a piece of cold mutton, and half a boiled fowl, and both Peter and M.'s driver were to be fed. Let us have soup and apple dumplings, said M., then, with other light dishes, there will be plenty for all. I knew she could make soup out of anything; so I assigned that portion of our task to her, while I went in search of the other light dishes she talked of. There were no vegetables gathered, except potatoes, but I had a box of macaroni in the closet, that most valuable viand, which no country house keeper should ever be without, if she can possibly procure it, so acceptable at all times, and particularly valuable for an emergency like the present. Soup and cold fowl, with macaroni and potatoes, was an enviable dinner for hungry people, with apple dumplings in prospective. I watched with some interest the making of the soup; but my friend knew well what she was about. The mutton was hashed and put into two quarts of water; then was added two onions, four potatoes, two carrots, and a small leaf of cabbage, all cut fine; half a tea cupful of rice, and a table spoonful of salt. When all had boiled half an hour, half a tea cupful of tomato catsup was added, with two ounces of butter, rolled in two table spoonfuls of flour, and suffered to boil

a quarter of an hour longer, when the soup was ready for the table. I must remember this receipt, for it is a good one.

We had much discussion over our receipts for cooking macaroni, making apple dumplings, and boiling potatoes. On the first two we disagreed; but upon potato boiling, there was but one opinion—that much-abused vegetable, the one most easy to cook, was but little understood. Potatoes should never be soaked in water either before, nor after boiling; they should be washed only a few minutes before putting them into the pot, but thrown into boiling water, with a little salt, and placed over a quick fire. Twenty minutes is quite long enough to allow for small potatoes, but large ones require half an hour. As soon as a fork will pass through them with ease, the water must be drained off, and the potatoes dished for the table.

Our receipts for dressing macaroni were compared—mine, the true Italian mode, was pronounced too patrician for us, to-day, it being as follows:—One quarter of a pound of macaroni, boiled in water, in which there must be a little salt. When the macaroni is done (twenty or thirty minutes is sufficient), the water must be drained off, and the sauce pan kept covered; roll two table spoonfuls of butter in four of flour; boil a pint of milk and half a pint of cream, to which add the butter and flour; boil it until it becomes thick. The sauce must be stirred all the time it is boiling—grate a quarter of a pound of cheese; butter the pan in which it is to be baked; put in first a layer of macaroni then one of cheese, with some sauce, and so on, until the dish is full. The last layer is to be cheese, with which macaroni is to be covered; ten minutes will bake it in a quick oven. My friend's mode, however, which was the simple plebeian style, was decided on, and was this: The macaroni, with a little salt, must be boiled half an hour, in water enough to cover it; the sauce is made of a gill of boiled milk, into which is stirred two ounces of butter, rolled in a table spoonful of flour, pepper, salt, half a tea spoonful of mustard, and if agreeable, a little grated cheese. When the macaroni is done, and the water drained off, stir into the boiling sauce two well-beaten eggs, and immediately pour the mixture over the macaroni, and it will then be ready for the table. Nothing could suit us better—only half an hour to cook, and such a nice dish, when done, and should there be any left, too, it can be dressed my way to-morrow.

The apples being prepared, my friend's better knowledge came to my aid. Her receipt is more wholesome, tender, and economical of butter and time—nothing but pouring boiling water into a pan of flour, into which a little salt has been thrown, and stirring it quickly until a paste is made; the hands must be well dusted with flour, and enough of the paste kneaded at a time, to cover one apple. Each dumpling must be tied in a separate cloth, and put into boiling water. If the crust be thin, three quarters of an hour is sufficient to boil them. There, then, was a comfortable dinner prepared and cooked in an hour and a half, without bustle, and with little trouble.

We had earned our dinner, and enjoyed it accordingly. Accustomed to wait on ourselves, we were not long in washing up, and reducing all to

order again. M.'s knitting bag and my work basket were produced, over which we kept up a rambling and discursive talk, apparently without connexion, but all tending to the same end—thrift, that main spring of a farm. We exchanged patterns, fitted collars, and arranged a new quilt, as I have decided not to have my old mouslin de laine dresses died, but make them into a nice comfortable for the best bed. They are light and warm and much better for that purpose than cotton covers. I gave M. an early cup of tea, and she has returned to her happy home. I feel well satisfied with my day of pleasure; let me now see if my young people, whom I hear driving in the gate, will have as much reason to be pleased with theirs.

My experience of to-day has convinced me never to be without macaroni, rice, and tomato catchup, in my store room, and if I can make up my mind to be so extravagant, I will get a box of vermicelli for beef soup; but it must be kept for company—nicely-made noodles will do for common use.

Boys' Department.

AGRICULTURAL CHEMISTRY.—No. 7.

IN my last letter, I gave you a brief description of the formation of soils. We will next consider their ingredients, or constituents. The earth, like the air, is composed of certain elements, some mechanically, and some chemically combined, but unlike the atmosphere, these elements exist in widely different proportions, in different localities, and some which are found abundant in one section are entirely absent in another. It is this want of uniformity in the distribution of elementary substances, that occasions the many varieties of soil, you have observed each diversity being distinguished by different kinds and proportions of elementary constituents.

As the fertility of a soil depends on its containing a sufficiency of the proper ingredients for promoting vegetable growth, and in suitable proportions, it becomes important to know what these ingredients are, and how they may be discovered. By the *analysis* of any plant (which means the separation of its elementary constituents), we may ascertain what kind of food it requires, or in other words, what elements must exist in the soil where it grows. Its carbon, oxygen, hydrogen, and nitrogen may be furnished by the air, but we will find it to contain other elements, which are not found in the atmosphere, and which must consequently be obtained from the soil. We may find it to contain a portion of phosphorus, another of potassium, and another of sodium, substances which it could obtain from no other source than the soil. If, then, we know what elements are necessary to form the plant we wish to cultivate, we may, by analyzing our soil, know whether it contains those elements, and if it does, we may attempt the cultivation of that plant with reasonable hope of success, provided other things, as climate, location, &c., are favorable. If it does not contain them, or if any one of them is deficient, it would be a useless and hopeless undertaking to attempt its culture. In this case, it would be for our advantage, either to substitute some other vegetable, which requires no

ingredients save those which our soil is capable of supplying, or to furnish our soil with a supply of those ingredients in which it is deficient. Here then you perceive is one of the practical advantages of chemical knowledge to the agriculturist. In the one case, it enables us to adapt our crops to our soil, in the other, our soil to our crops. Thus science leads us, at once, to a knowledge of those facts which would otherwise only be discovered by a long and expensive course of experiment.

Chemists have devoted much time and labor to the analyses and examination of earths, plants, minerals, and all other substances found in nature. Their investigations have led to the discovery of fifty-six simple substances, and we have good reasons for believing that few, if any other elements, exist in nature, all the various forms which matter assumes being produced by the various combinations of some of these elementary bodies. If you will turn to page 99 of the present volume of the *Agriculturist*, you will find the names of the most distinguished members of this family, though you need not be apprehensive that I am going to weary your patience with a description of each particular individual belonging to it.

Some of these bodies are of such rare occurrence in nature, and of so little apparent consequence in either nature or the arts, as not to merit the attention of any save professional chemists, and in fact, the agricultural chemist is little interested in any save those which enter into the composition of vegetables. This class includes but sixteen, and four of them have already been described, viz: carbon, oxygen, hydrogen, and nitrogen. These belong more properly to the air, though they also exist in the soil. The remaining twelve are the following:—Sulphur, phosphorus, chlorine, iodine, bromine, potassium, sodium, calcium, magnesium, iron, manganese, and silicon. With two of these, viz: iron and sulphur, you are sufficiently familiar; a description of the remaining ten will be given in my next letter.

J. M'KINSTRY.

Greenport, Columbia Co., N. Y.,
Oct. 1st, 1848.

WHAT IS CAPILLARY ATTRACTION?—It is that by which water is induced to rise within a tube (inserted in it) to a height dependent on the fineness of the bore. It is that by which, similarly, water rises in a lump of sugar, through the tubular passage, or pores existing in its substance. And it is that by which, in like manner, water will rise through the subsoil and soil of land which is wet below. Its form depends on the smallness of the tube through which it induces the water to rise. It is thus greatest in a soil whose particles are fine—in a clay soil in fact. And it is dependent solely on this fact—not on any other, except in so far as it may affect the mechanical texture of the soil. The soil is best when it exists in medium intensity—when the land is in fact neither too stiff nor too free.

A SIGN.—When you see a female rise early, get breakfast, and do up her mother's work in season, and then sit down to sew or knit, depend upon it, she will make a good wife.

MY RABBITS.

In looking over our "Farm Every-Day-Book" this evening, according to my usual custom, I find the following entry, made just one year ago: "Edward discovered a nest of seven young rabbits in the pasture lot, F." He was engaged in cutting down some bushes, when he noticed a small layer of dry twigs, over which his scythe had just passed, to be violently agitated. At first, he supposed that it concealed a litter of field mice; but a raw Hibernian curiosity induced him to investigate further before signing their death warrant. His patience was rewarded by the appearance of the seven little rabbits, with shining black eyes, long, delicate ears, and fat, sleek bodies, huddled together—thanks to their bed quilt—unconscious of harm. He replaced everything as he found it, and then continued his work. I did not hear of the discovery until dinner time, when, as a matter of course, I started off at full speed to prosecute the examination.

That night, I dreamed of rabbits, and my eager footsteps bruised the chaste dew drops, on the pasture lot, early the following morning, and I became convinced of the pleasure and profit of rabbit breeding. In various imaginary profit and loss accounts, the balance was ever largely in my favor. But, like the unfortunate milk maid of fable, I was counting my chickens before they were hatched.

As I had made up my mind to embark in the business, my first care was to provide suitable accommodations for the foundlings, they being my "stock in trade." Two large soap boxes converted into one, with slats in front, inclined floor, and projecting roof, made certainly a very good, if not a handsome hutch. It was hung up on the shady side of a shed, secure from the attacks of vagrant dogs or cats.

For two long weeks, my labor remained unappreciated, as I wished to capture not only the little fellows but the old doe herself. In this, however, I was disappointed. She was ever from home, when any person approached the nest, was too cunning to be caught in a box trap, and above being intoxicated by parsley steeped in pure Cognac. So, at last, I was willing to take the young ones alone, lest I should lose not only the doe but them also.

In a short time after removal to their new quarters, their limbs were strengthened by exposure to the air, and they gave vent to their spirits by sundry gambols around their cage, very interesting to all concerned. Of course, they were unacquainted with the necessary arts of eating and drinking. To prevent starvation, I gave each one, through a quill, every two hours, a little warm milk directly from the cow; but, before the end of a week, they would drink from a shallow saucer, and nibble upon tender cabbage leaves.

By the middle of October, my pets (with the exception of one that died), had grown to be large, and looked very healthy, much to the astonishment of Uncle Nezer, a neighbor who had predicted my failure. About the time when the hutch was placed under the shed for winter quarters, a fat brace was put into the pot for dinner. And soon afterwards, one of the two remaining bucks killed the other, through jealousy, as was supposed. Two bucks in the same cage are like two mothers-

in-law in the same house—the walls are not far enough apart. An intelligent lad, who called upon us one day on business, fancied my large buck, and, on a promise to bring another in exchange, carried him off, which was the last I have seen of either. Now only two remained, one of which died during the winter (perhaps of a broken heart), and was thrown into the dung heap.

The seventh and last was alive and well the beginning of spring. But the vegetable bins and grain boxes suffered a little in consequence. She was too anxious to regain her liberty, however, to suit me altogether; her devotion to the goddess of the cap was manifested by gnawing away sundry parts of her cage some dozen times, which caused me some little trouble to replace. Disgusted with rabbit keeping, I was thinking about opening the cage door, when her death decided the question. One afternoon in March, she slipped her leg between the slats, and, before she could be extricated, it was broken. Poor little thing—*Vale!*

At the expiration of six months, my seven rabbits were all gone. The hutch was empty! Quite an unfortunate conclusion to my experiment. What was the cause, I cannot say; it was not want of care nor food. I leave the question with the kind reader, who may rest assured, that if I undertake the keeping of rabbits again, he shall know it.

CALVIN COULTER, JR.

Hawthorn Hedges, N. J., Aug. 20th, 1848.

CHANCE OR LUCK.

ONE dark stormy morning last winter, a thoughtful little boy sat knitting by the fire, while his mother was preparing the fragrant buckwheat cakes for breakfast. For a long time he was perfectly quiet, as if something puzzled him. At last, he looked up and said: "Mother, what do you always put an odd number of stitches on my stockings for?" "Because it leaves one for the seam stitch, and makes the rest even on the needle," she replied.

The boy laughed, quite satisfied with the explanation, if not of the necessity of the thing, and went on with his work. Presently, he looked up again, and said: "Mother, why do you always put thirteen eggs under the setting hen—does she like it best?" "I do not know if she cares about it," said she, "but I do it for good luck—odd numbers are the most lucky." The thoughtful boy was not satisfied; and, after a pause, he again said: "Why, mother, Squire Miller told George it was to make more sure of having twelve chickens, for we might always count upon having one bad egg in every dozen, and he liked to have an even dozen of chickens or ducks, in every brood." Is not the Squire right? Customs are often the results of necessity or experience, and in this case, he has, I doubt not, given the origin of a practice, almost universal among our farmers from a vague idea of good or ill luck attending it; but which, in reality, perpetuating a silly superstition.

"The fool saith in his heart, there is no God"—and so does every one who believes in *chance* or *luck*, whether he acknowledges it even to himself or not.

E. S.

Eutawah, September, 1848.

FOREIGN AGRICULTURAL NEWS.

OUR latest advices from Europe are to the 14th of October.

MARKETS.—*Ashes*, sales trifling. *Cotton*, a decline of $\frac{1}{4}$ d. per lb. *Wheat and Corn*, firm, but without change. *Beef*, an advance of 2s. to 3s. per tierce. *Pork and Lard*, as per our last. In other products we notice no change demanding attention.

Money was abundant, and some investments going on in American stocks.

The Grain Crops throughout Great Britain and Ireland prove to be under an average; but on the continent they are large, and the supplies from that quarter will be abundant. Potatoes are extensively affected by the disease and large quantities have rotted.

Guano and Tobacco from Peru.—A vessel lately arrived in London, from Callao, having on board 1,300 tons of guano, the largest importation of that article, which has taken place for a considerable time past. The same vessel brought 430 bales of tobacco, which would appear to be a rather unusual and remarkable article from the southern part of this continent.

Blue Vitriol, a Preventive of Smut in Wheat.—A farmer, in South Berks, states that, by the use of blue vitriol (sulphate of copper), he has succeeded for four seasons in warding off the smut in his wheat. The plan adopted appears to be simple, cheap, and efficient.

Agricultural Schools in France.—At a recent session of the National Assembly of France, the principal part of the day was devoted to the bill relative to agricultural schools. It was resolved that one of these institutions should be founded and maintained in each department at the public expense, and further, that the country should be divided into agricultural districts, not exceeding twenty, in each of which a government school is to be established.

Vegetarian Society.—There is a society in existence, in England, under this title, the members of which abstain from eating meat and drinking intoxicating beverages. The annual meeting was celebrated a short time since, by a public dinner at Manchester, to which 232 persons sat down, many of whom had been abstainers from animal food, for periods varying from 20 to 40 years. The following is a list of courses served up:—

First Course.—Large savory omelet, rice fritters, beet root, onion and sage fritters, savory pie, mushroom pie, bread and parsley fritters, force meat fritters, large macaroni omelet—water the only beverage.

Second Course.—Plum pudding, moulded rice, almonds and raisins, cheese cakes, figs, custards, grapes, flummery, sponge cakes, gooseberries, creams, nuts, red and white currants, moulded sage, fruit tarts—water the sole beverage.

Russian Beef in England.—A vessel lately arrived at London from Archangel with 797 tierces of beef, 15 barrels of ox tongues, and other productions of the Russian empire.

Draining by Steam.—The stone of the building for a new steam engine of 50 horse power for the drainage of the fen lands of the Stow Bardolph district, was lately laid, in the presence of several of the commissioners, which afforded a gratifying sign of improvement to the county.

Poudrette Companies in France.—It is stated that there are twenty-two companies in France busily engaged in converting the refuse of towns into inodorous poudrette. The disinfectant generally employed, is said to be the chloride of iron.

Derby Cows.—The native cows of that county is the old long-horned breed. They are said to be scarce, and are only to be found in a few dairies near the lakes in Westmoreland, in Lancashire, Cheshire, Shropshire, Staffordshire, Derbyshire, Warwickshire,

Gloucestershire, and Oxfordshire. The breed is becoming deteriorated from the practice of breeding "in-and-in." Their milk and cream, as well as their beef, are represented to be of superior quality. They are longer in attaining their growth than the short horns, but feed easier; that is, fatten quicker on inferior food, and are more certain of breeding in a rigorous climate. The short-horns give more milk at first, after having calved, but the long-horns continue longer in milk. They are also longer in attaining their full milk, but they have been known to produce an abundance up to the age of 17 or 18 years. One instance is recorded in which a cow of this race gave 13 quarts each meal, and held on to 11 quarts until she went dry.

Hornets.—Part of their diet consists of nectarines, peaches, apricots, grapes, greengages, plums, apples, and Pears. The wasp is carnivorous as well as fructivorous, and entomologists will probably pronounce the hornet to be so likewise. It enters bottles of sugar and water or sugar and beer that are hung about wall fruit trees as wasp traps.

Tying Herbaceous Plants.—Instead of tying these up like sheaves of corn, have a hoop of a small wire drawn through or fastened tightly to an upright stick placed in the ground. Then let the flower stalks be tied regularly round the hoop, having some loose ones in the centre to form a close head. Some staked in this way here look extremely well.

Dr. Klotzsch's Plan of Topping Potatoes.—Mr. Wainwright, of Rushton, Northamptonshire, has tried Dr. Klotzsch's plan of topping the potato crop, and gives the following as the result of his experiment.

Row in which the leading shoots were nipped off—
Produce. Sound. Diseased. Diseased when dug. After being dug.
70 lbs. 14 lbs. 56 lbs. 14 lbs. 42 lbs.

Row in which the leading shoots were untouched—
Produce. Sound. Diseased. Diseased when dug. After being dug.
86 lbs. 23 lbs. 63 lbs. 11 lbs. 52 lbs.

Giving an excess of diseased tubers in the former instance in the proportion of 344 to 317. The produce however, in the former case, was of the finer quality. Notwithstanding great care has been taken to give the potatoes as little manure as possible, the disease has been most pernicious. The result of two weighings gave 98 lbs. sound to 111 lbs. diseased, and 46 lbs. sound to 325 lbs. diseased. The diseased tubers, after a few days, became extremely offensive and utterly useless.

Extraordinary Crop of Potatoes.—A gentleman in Banff, having in the spring received a few potatoes, part of a small quantity procured from Rotterdam, planted them in his garden in the Seatown having cut the seed as usual. The plants very soon appeared, and through the summer continued to grow most luxuriantly, so much so that all who saw them predicted that there would be nothing but shaws. This prediction, however, has been anything but verified; for, on the crop being dug, which it was on Tuesday last, there were gathered from the ground, which consisted of exactly one Scotch rood, or fall, or the 160th part of a Scotch acre, the unprecedented quantity of 18 pecks, or four and a half bushels—the produce being thus at the rate of 720 bushels per acre. At several of the stems upward of 40 potatoes were found, one had 63 full-grown potatoes, and another were counted the very extraordinary number of 110. We understand that the gentlemen who received them has determined upon greening and preserving the whole for seed, and we sincerely trust that he will be successful in bringing this prolific potato into general use. We may mention that there was not the slightest appearance of disease, but on the contrary, every tuber had the most healthy appearance, giving every reason to believe that not a seed will be lost.—*Banff Journal.*

Editor's Table.

CATTLE SHOW AND FAIR OF BURLINGTON COUNTY AGRICULTURAL SOCIETY, NEW JERSEY.—We received the New-Jersey Mirror, containing full particulars of the Annual Show of this flourishing society. We think it must have been a spirited affair and highly gratifying to all present. We observe that Mr. A. Maillard, of Bordentown, took seven first premiums for different kinds of things shown there; but with his characteristic liberality, he declined them all, and generously handed them over to the society to be offered again next year. Success we say to the farmers of New Jersey, and we hope another year to be present at some of their agricultural meetings.

PREMIUM DAGUERREOTYPES.—On a recent visit to Brady's Gallery, 205 Broadway, we were favorably impressed at the inspection of several Daguerreotypes, in miniature, of a number of our friends, which excelled in truthfulness, beauty, and finish, anything of the kind we have yet seen. Mr. Brady, who has taken the first premium at the fairs of the American Institute, for three or four years in succession, has brought this comparatively new art to a perfection, no where else surpassed, if equalled, which justly entitles him to the encomium thus bestowed. Being himself an artist of a high order, independent of his knowledge of optics, as connected with this particular branch of his profession, he is enabled to impart to his likenesses, both color and expression almost equal to life itself. By the way—Why is not this art practised more than it is, in taking portraits of favorite domestic animals, trees, buildings, paintings, &c., in which the cost, in many instances, will not exceed one tenth part as much as when sketched or painted the usual way? We hope our agricultural friends will take a hint at this suggestion. Mr. R. S. Griswold, of Connecticut, had his fine Ayrshire stock beautifully Daguerreotyped last year and made sales of them, at a distance, from the portraits, much to the satisfaction of all concerned.

SCHOOL ARCHITECTURE; or Contributions to the Improvement of School Houses in the United States. By Henry Barnard, Commissioner of Public Schools in Rhode Island. Second Edition. Illustrated by Numerous Engravings. New York: A. S. Barnes & Co. Cincinnati: H. W. Derby, pp. 384, 8vo. Price, \$2. This excellent work has been compiled with much care, is handsomely illustrated, and appears to be well adapted to the use of school committees, teachers, and district-school libraries. For a specimen of the work, see our next number.

AGRICULTURAL BOTANY; An Enumeration and Description of Useful Plants and Weeds, which Merit the Notice, or Require the Attention of American Agriculturists. By William Darlington, M.D. Philadelphia: J. W. Moore; New York: Mark H. Newman, pp. 270. Price, \$1. For a favorable notice of this work, see p. 340, of the present volume.

HOVEY'S FRUITS OF AMERICA.—No. 6, of this beautiful work has been received, and contains accurate portraits, printed in colors, of the Early York Peach; Le Curé Pear; Rostiezer Pear; and Flemish Beauty Pear. This is the only periodical in America that is devoted wholly to fruits, and justly deserves, as it receives, a liberal support. Price, \$1 per number, published every alternate month. C. M. Saxton, Agent, 205 Broadway, N. Y.

THE AMERICAN QUARTERLY REGISTER AND MAGAZINE.—This sterling periodical, we are heartily glad to see, has reached its second number, and is replete with a variety of historical, statistical, and other interesting matter useful to be known. The

article on the "Tenure of Land," in particular, should be read and understood by every farmer in the country. The work is edited by Judge Stryker, late of New York, and is published quarterly by E. C. & J. Biddle, Philadelphia. Price, \$5 per annum. For further particulars, see p. 260 of the present volume. C. M. Saxton, Agent, 205 Broadway, N. Y.

LARGE CHEESES.—Three immense cheeses, weighing 1,900, 1,570 and 1,500 lbs. each, were brought from Ashtabula this morning by the steamer Cleveland. The cheeses were made in Ashtabula county by Messrs. Austin & Stone, and give evidence of the great state of perfection to which the dairies on the Western Reserve have been brought. They are boxed up with great care and are on their way to the American Institute for exhibition.—*Buffalo Paper.*

MAMMOTH CORN.—We have received an ear of corn, which was raised on the farm of Mr. Thomas Inden, about two miles from the town of Cape Girardeau. It is most extraordinary for its length, which is sixteen inches, and contains sixteen rows, and an average of seventy grains to the row, making 1,120 grains to the cob.—*St. Louis Rep.*

WELLERISM.—"I wish to introduce a bill for the destruction of worms," as the woodpecker said in a late stump speech.

A PLAIN TRUTH PLAINLY SPOKEN.—A writer of the present day says there never was a time since the completion of the pyramids, when such a clamor was abroad, as now, for the right to work; and there never was a generation, since the invention of easy chairs and gloves, that tried so hard to shirk it. People want to have their hands employed 'tis true, but in climbing, not in labor. Their endeavor is not to get their living out of the ground, but out of one another, like ants and spiders.—*Exchange Paper.*

CONFUSION OF NAMES IN THE CHINA GOOSE.—There is a venerable joke about a Spanish Don who knocked at a cottage door to ask a night's lodging. "Who's there? What do you want?" said the inmates. "Don Juan José Pedro Antonio Alonzo Carlos Geronimo, &c., &c., &c., wants to sleep here to-night." "Get along with you," was the reply; "How should we find room here for so many fellows?" The China goose is in the same position as the Spanish Don. It has names enough to fill a menagerie. China Goose, Knob Goose, Hong-Kong Goose, Asiatic Goose, Swan Goose, Chinese Swan (*Cygnus sinensis*, Cuvier), Guinea Goose, Spanish Goose, Polish Goose, Anas and Anser cygnoides, Muscovy Goose, African Goose, and probably more besides.

ANOTHER SAGACIOUS SHEEP.—In the 29th number of the Mail, was an article concerning a sagacious sheep, which put me in mind of one I owned four or five years ago. It was a Southdown buck. The difference between the two sheep was, that while the one alluded to in the Mail would go and call up his master to take care of mischievous cattle,—mine would go and take care of them himself. I have known him, when my cattle have broken into my neighbor's field, to drive them all out, and stand by the gap in the fence and keep them out. He would leave the sheep and feed with the cattle during the summer. He was a peacemaker, for he would not allow any fighting among the cattle. He mastered all my cattle, and if my neighbors' came to my barn, he would drive them home. My small boys would sometimes get on his back to ride, when he would contrive all ways to rub them off—running close to the post of the shed, the fence, or corner of the barn. He would not be pushed, crowded, nor insulted, in any way, and though a friend of peace, I have known him to fight many a duel. But the poor fellow came to the block, at last, and was beheaded.—*Eastern Mail.*

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, OCTOBER 25, 1848.

ASHES, Pots,.....per 100 lbs.	\$6 12	to	\$6 19
Pearls,.....do.	6 25	"	6 31
BALE ROPE,.....lb.	6	"	8
BARK, Quercitron,.....ton,	26 00	"	28 00
BEANS, White,.....bush.	75	"	1 25
BEESWAX, Am. Yellow,.....lb.	19	"	22
BOLT ROPE,.....do.	11	"	12 1/2
BONES, ground,.....bush.	45	"	55
BRISTLES, American,.....lb.	25	"	65
BUTTER, Table,.....do.	15	"	25
Shipping,.....do.	9	"	15
CANDLES, Mould, Tallow,.....do.	11	"	13
Sperm,.....do.	25	"	38
Stearic,.....do.	20	"	25
CHEESE,.....do.	5	"	10
COAL, Anthracite,.....2,000 lbs.	4 50	"	5 50
CORDAGE, American,.....lb.	10	"	12
COTTON,.....do.	5	"	9
COTTON BAGGING, Amer. hemp,....yard,	15	"	16
FEATHERS,.....lb.	30	"	40
FLAX, American,.....do.	8	"	9
FLOUR, Northern, Southern and West'n bbl.	5 00	"	5 87
Fancy,.....do.	6 00	"	6 50
Richmond City Mills,.....do.	7 00	"	7 25
Buckwheat,.....do.	—	"	—
Rye,.....do.	3 50	"	4 00
GRAIN—Wheat, Western,.....bush.	1 10	"	1 31
Red and Mixed,.....do.	1 00	"	1 20
Rye,.....do.	67	"	69
Corn, Northern,.....do.	65	"	73
Southern,.....do.	60	"	65
Barley,.....do.	73	"	75
Oats,.....do.	27	"	35
GUANO, Peruvian,.....2,000 lbs.	50 00	"	50 00
Patagonian,.....do.	35 00	"	40 00
HAY, in bales,.....do.	45	"	50
HEMP, Russia, clean,.....ton.	195 00	"	200 00
American, water-rotted,.....do.	160 00	"	220 00
American, dew-rotted,.....do.	140 00	"	200 00
HIDES, Dry Southern,.....do.	6	"	7
HOPS,.....lb.	4	"	12
HORNS,.....100.	2 00	"	10 00
LEAD, pig,.....do.	4 25	"	4 37
Pipes for Pumps, &c.....lb.	5	"	6
NEAL, Corn,.....bbl.	3 12	"	3 35
Corn,.....hhd.	12 50	"	13 00
MOLASSES, New Orleans,.....gal.	22	"	24
MUSTARD, American,.....lb.	16	"	31
NAVAL STORES—Tar,.....bbl.	2 00	"	2 25
Pitch,.....do.	1 00	"	1 25
Rosin,.....do.	1 19	"	1 25
Turpentine,.....do.	3 00	"	3 25
Spirits Turpentine, Southern,....gal.	40	"	42
OIL, Linseed, American,.....do.	54	"	56
Castor,.....do.	1 50	"	1 70
Lard,.....do.	70	"	75
OIL CAKE,.....100 lbs.	1 00	"	1 15
PEAS, Field,.....bush.	1 00	"	1 25
Black eyed, 2 do.....do	1 00	"	1 37
PLASTER OF PARIS,.....ton.	2 25	"	3 00
Ground, in bbls,.....of 300 lbs.	1 12	"	1 25
PROVISIONS—Beef, Mess,.....bbl.	9 00	"	13 50
Prime,.....do.	5 00	"	7 50
Smoked.....lb.	6	"	12
Rounds, in pickle,....do.	4	"	6
Pork, Mess,.....bbl.	9 75	"	13 00
Prime,.....do.	7 00	"	10 00
Lard,.....lb.	8	"	9 1/2
Bacon sides, Smoked,.....do.	3	"	4 1/2
In pickle,.....do.	3	"	4
Hams, Smoked,.....do.	5	"	9
Pickled,.....do.	4	"	7
Shoulders, Smoked,.....do.	4	"	5
Pickled,.....do.	3	"	4
RICE,.....100 lbs.	3 00	"	4 00
SALT,.....sack,	1 25	"	1 45
Common,.....bush.	20	"	35
SEEDS—Clover,.....lb.	5	"	7
Timothy,.....bush.	2 00	"	3 50
Flax, clean,.....do.	1 30	"	1 40
rough,.....do.	1 18	"	1 20
SODA, Ash, cont'g 80 per cent. soda,... lb.	3	"	—
Sulphate Soda, ground,.....do.	1	"	—
SUGAR, New Orleans,.....do.	4	"	6
SUMAC, American,.....ton,	35 00	"	37 00
TALLOW,.....lb.	8	"	9
TOBACCO,.....do.	2 1/2	"	7
WHISKEY, American,.....gal.	23	"	25
WOOLS, Saxony,.....lb.	35	"	60
Merino,.....do.	25	"	35
Half blood,.....do.	20	"	25
Common do.....do.	18	"	20

NEW YORK RETAIL PROVISION MARKET.

Meats.—Beef, from 6 to 14 cents per lb.; Veal, 7 to 12 cents; Lamb, 4 to 9 cents; Mutton, 6 to 9 cents; Pork and Sausages, 8 to 10 cents; Ham and Bacon, 8 to 12 cents; Beeves' Tongues, 37 to 62 cents each; Young Pigs, 75 cents to \$1.25 each.

Fish, &c.—Sea Bass, from 8 to 10 cents per lb.; Halibut, 10 to 12 cents; Cod and Haddock, 6 to 5 cents; Weak Fish and Blue Fish, 6 to 8 cents; Black Fish, 7 to 8 cents; Flounders and Poggies, 5 to 6 cents; Eels, 6 to 8 cents; Pike, 10 to 12 cents; White and Yellow Perch, 8 to 10 cents; Green Turtle, 10 to 12 cents; Lobsters, 5 to 6 cents; Fresh Mackerel, 10 to 12 cents each; Crabs (soft-shelled), 62 to 75 cents per dozen; Crabs (hard-shelled), 12 to 25 cents per dozen; Oysters, 75 cents to \$1.50 per 100; Clams, 25 to 50 cents per 100.

Poultry, Eggs, and Game.—Young Turkeys, from 75 to \$1 each; Old Turkeys, \$1 to \$2; Geese, 75 cents to \$1.25; Ducks, (domestic), 75 cents to \$1 per pair, Ducks (canवास-backed), \$1; Ducks, (wild), 50 cents; Teal and Widgeons, 50 cents; Chickens, 50 cents to \$1; Partridges, 50 to 62 cents; Pigeons, \$1.25 to \$1.50 per doz; Woodcocks, \$2 to \$2.25; Snipe, \$1.25 to \$1.50; Yellow Legs, \$1.50; Rice Birds 62 to 75 cents; Rail Birds, \$1.50. Robins, 25 to 37 cents; Crow Black Birds, 50 to 62 cents; Quails, \$1 to \$1.25; Rabbits, 10 to 12 cents each; Grey Squirrels, 6 to 10 cents; Venison, 12 to 18 cents per lb.; Eggs, 8 to 10 for 13 cents.

Honey, from 15 to 18 cents per lb.

Dairy Products.—Butter, from 12 to 28 cents per lb.; Cheese, 6 to 12 cents; Cheese Cakes, 8 for 12 1/2 cents; Milk, 3 to 6 cents per quart.

Ice.—25 cents per 100 lbs.

Fruit and Nuts.—Lady Apples, from \$3 to \$5 per bbl.; Newtown Pippins, Vanderveres, and Spitzenbergs, \$1 to \$2.50; Belle Fleurs, R. I. Greenings, Fall Pippins, Golden Pippins, Pearmaines, Gilliflowers, and Roxbury Russets, \$1 to \$1.50; Apples in small quantities, 3 to 12 cents per half peck; Vergoulose Pears, \$3 to \$4 per bushel, or 50 cents per half peck; Winter Pears, \$1 to \$2.50 per bushel; Quinces, 50 cents to \$2.50 per 100; Cranberries (eastern), \$6 to \$7 per bbl., or 31 cents per half peck; Grapes (Malaga), 18 to 25 cents per lb.; Grapes (Isabella and Catawba), 10 to 15 cents; Oranges, 37 to 75 cents per dozen; Lemons, 18 to 25 cents; Bananas, 37 to 75 cents; Chestnuts, \$3 to \$3.50 per bushel; Hickory Nuts, \$1.50 to \$2; Peanuts, \$1.25 to \$1.50; Cocoa Nuts, 6 cents each; Pecan Nuts, 8 to 10 cents per lb.; Filberts, 8 cents; Madeira Nuts, 10 cents; Almonds (hard-shelled), 12 cents; Almonds (soft-shelled), 18 cents.

Vegetables.—Carter, Mercer, and Kidney Potatoes, from 62 to 75 cents per bushel; Pinkeyes, 37 to 50 cents; Potatoes in small quantities, 6 cents per half peck; Sweet Potatoes, \$1 to \$1.25 per basket, or 25 cents per half peck; Onions (common red), 37 to 50 cents per bushel, or 5 cents per rope; Onions (silver-skinned), 50 to 62 cents per bushel; or 12 cents per half peck; Leeks, 9 for 5 cents; Tomatoes, 75 cents to \$1 per bushel, or 15 cents per half peck; Green Peppers (large), 75 cents to \$1 per 100; Citron Melons (for preserving), 6 to 18 cents each; Valparaiso and Patagonian Squashes, 25 to 50 cents each; Canada Crook-necked Squashes, 6 to 12 cents each; Long-necked Striped Squashes, 12 to 18 cents each; Green Corn, \$1 to \$1.25 per 100 ears, or 8 ears for 12 cents; String Beans, 18 to 25 cents per half peck; Lima Beans (shelled), 15 to 18 cents per quart; Flat Turnips, 25 cents per bushel, or 8 cents per peck; Ruta Bagas, 37 cents per bushel; Beets 37 to 50 cents per bushel, or 1 cent each; Carrots, 50 to 62 cents per bushel, or 2 cents each; Parsnips, 37 to 50 cents per bushel, or 3 cents each; Oyster Plants, 6 to 8 cents per bunch; Purple Cabbages, 8 to 10 cents per head; Cabbages (common), 4 to 6 cents; Cauliflowers, 18 to 50 cents; Celery, 6 to 12 cents; Lettuces, 1 to 2 cents each; Radishes, 1 cent per bunch; Egg Plants, 4 to 6 cents each.

REMARKS.—No changes worth speaking of since our last. The crops are now all in at the north. Wheat and Corn have proved a large yield; the other grain crops, and Hay a full average. Potatoes, a good crop; Turnips, rather short; other roots, a fair crop. Cotton, Sugar, Rice, Hemp, and Tobacco, about the same as last year—a full average yield on the whole.

TO CORRESPONDENTS.—Communications have been received from J. Bevan, E. S., C. N. Bement, Harry Ingersoll, D. Danforth, Thomas B. Smith, Samuel Allen, Reviewer, R. B. Parsons and N. Longworth.

Kephart's Fruit and Vegetable Preserver.—D. R. R., of Saratoga.—For an improvement on this invention, see page 332, of the present volume.

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 American Shepherd, by Morrell. \$1.
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 American Poulterer's Companion, by Bement. \$1.
 American Veterinarian, by Cole. 50 cents.
 Buist's Kitchen Gardener. 75 cents.
 Buell's Farmer's Companion. 75 cents.
 Chaptal's Agricultural Chemistry. 50 cents.
 Downing's Fruits and Fruit Trees of America. \$1.50.
 Domestic Animals, by R. L. Allen. Cloth, 75 cents; paper, 50 cents.
 Domestic Economy, by Miss Beecher. 75 cents.
 Farmer's and Emigrant's Hand-Book. \$1.
 Fruit Culturist, by J. J. Thomas. 50 cents.
 Gardener's Farmer's Dictionary. \$1.50—leather, \$1.75.
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 Orders sent by mail, accompanied by Cash, will receive prompt attention, and the books sent by mail, or otherwise.
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 4th Nov.

ANNUAL MEETING OF THE NEW YORK STATE AGRICULTURAL SOCIETY.

THE Annual Meeting of this Society will be held at Albany, on the third Wednesday (17th) of January, 1849. Premiums will be awarded on Grain and Root Crops, Butter, Cheese, Fruits, &c. Statements should be furnished the Secretary early in January.

It is desired that there should be a full representation from County Societies, as well as of the friends of agriculture generally.

A Pomological Exhibition will be held at the rooms of the Society, and growers of fruit are respectfully requested to forward specimens to the secretary as early, if practicable, as the 15th of January.

Nov. 1st, 1848..

B. P. JOHNSON, Secretary.
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After a thorough investigation of the different systems adopted in Europe and America, and of the rates of premium charged, this company have reduced the premium 25 per cent. payable in cash, annually, semi-annually, or quarterly, as may be preferred, under a firm conviction that the exigencies of the Company will never exceed and seldom require one half of the annual premium now charged by the English and American Companies, which reduction will still leave a large margin for seasons of unusual sickness and death among its members—preferring to reduce the premiums at once to an amount more nearly approximating the actual necessities of the Company than to adopt the system of premium notes which is attended with many disadvantages.

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5. No personal liability of the members beyond the amount of their annual premium of insurance.

6. Creditors may insure the lives of their debtors, or debtors themselves may insure for the protection of their creditors.

A prospectus has been issued (which can be had at the office of the Company, or any of its agents), explanatory of the terms and conditions of insurance.

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$\frac{1}{2}$ " " " 1 " 14 " 6 do 6 " "			
$\frac{3}{4}$ " " " 2 " 8 " 8 do 4 " "			
$\frac{1}{2}$ " " " 3 " 8 " 10 do 8 " "			
1 " " " 5 " 10 " 14 do " "			
$1\frac{1}{4}$ " " " 6 " 12 " 17 do 8 " "			
$1\frac{1}{2}$ " " " 11 " " 19 do " "			
2 " " " 16 " 12 " 27 do " "			
$2\frac{1}{2}$ " " " 23 " 8 " 50 do " "			
3 " " " 28 " " 59 do " "			
$3\frac{1}{2}$ " " " 45 " " 80 do " "			
4 " " " 49 " " 90 do " "			
4 " " " Water Pipe 15 do 14 " "			
$4\frac{1}{2}$ " " " " 17 do 4 " "			
5 " " " " 34 do " "			

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